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"A NATIONAL HEALTH SERVICE"

HEALTH of mind and body is the finest possession we can have. At present, however, an individual's chances of maintaining it depend too much upon the bed in which he is born. The odds are weighted heavily against the poor. They have less chance of being born alive, they are more likely to die at all ages, and they have a shorter expectation of life and a greater expectation of illness.

But, though these social differences demonstrate the vital importance of economic forces and the great need for dealing with them, untimely deaths and preventable disease and disability are occurring in every section of the community.

The causes are many; but outstanding among them are unfavourable surroundings, unhealthy modes of life, and gaps in the health service. There are signs, however, that we are about to pass from a defensive to an offensive phase. Social Medicine promises well; the public as a whole is becoming increasingly concerned about social problems; and now, in the recently published* White Paper on "A National Health Service," the Ministry of Health has stated the Government's intention to ensure that the country's full resources are brought to bear "upon reducing ill-health and promoting good health in all its citizens."

All this is most encouraging. If we are really going to reach a higher level of personal and public health there must be a concerted attack upon harmful conditions and disease. But what can the individual do to help himself?

The Ministry's answer is that "Perhaps the most important point of all is the need for a new attitude to health care." This is surely a clear recognition of the essential part that health education must play in making personal health "something to be positively improved and promoted and made full and robust".

* Command 6502. His Majesty's Stationery Office, 1944. Price 1/–.

BALANCED DEVELOPMENT IN CHILDREN

By Gwendolen E. Chesters, B.A.

Most people who have the care of children say with honesty that the object of their work with them is to provide for the full, all-round development of each child; and we are all familiar with the stating of this aim as the development of a healthy mind in a healthy body. It seems, however, all too easy for such phrases to be only partially understood, and for there to be a lack of any real sense of proportion in the care given to most children. Many homes, while contributing much to the well-being of the children, are lacking in understanding and in the possibility of making the fullest provision for them; and even the best home cannot permanently supply all that is needed. Examination of the way in which the time of most children is filled by those who have charge of their "education" will show how uneven is the emphasis put on the various aspects of development. Most of the time is given to learning and thinking of particular kinds, a relatively small amount to some kind of muscular activity, and a very little to something described as music, art and other occasional subjects, though just why these are included is not always clear. Much of the children's home time has in addition to be given to the same kinds of intellectual activity; and little time is left to the child in which home can make good the shortcomings of school, even when it understands how to do so. The idea behind the planning of such timetables would seem to be that development is largely the outcome of intellectual activity and, in a lesser degree, of muscular activity. It gives little recognition to anything in the nature of sound emotional development, or of genuinely social development. There are, of course, more balanced programmes to be seen, but these are, in the main, still regarded as experiments.

A similar narrowness of vision is sometimes found in the planning of the use of time by even younger children. In their case too, there is need of much more understanding at home. Much of their time is lost to them by their having always to fit into grown-up arrangements and to live at a rate which is far from being their own. And, sometimes when they spend their time in more organised Nursery groups, "education" for their all-round development would seem to consist in being kept clean and tidy and in having something that is described as sense-training. It is possible fortunately to find Nursery education of a better kind than this, but there can easily be an over-emphasis for these young children on one aspect of physical care, and on a restricted kind of intellectual activity.

Further evidence of the lack of balance in methods of upbringing can

easily be found. Though most of us have been in some way brought up and "educated," there are few of us who can lay claim to being really whole or balanced in our development.

Aspects of Development

For a more balanced development to be achieved in children, at least the four aspects of development already mentioned have to be fully considered. Whole development includes physical and muscular development, intellectual development, emotional development and social development; and if good care is given to these four it will be found that good provision is also being made at the same time for the development of character. Each of these aspects of development is closely linked with every other, and our problem is to care for each of them in such a way as to achieve a level growth of them all. Failure in development in any one of these aspects affects the satisfactoriness of the rest of a child's development, and any inequality results in a lack of balance. To take a simple example: an anxious, worried child failing in the development of settled confident feeling is not only upset in his feelings. The quality and effectiveness of his thinking is impaired and its development disturbed through the distracting effect of troubled feeling.

What is needed is that we care for the whole of development, and that we care for it as something that is whole, and not as something that is made up of separate unrelated parts. It is not easy for us to devise a means of caring for the whole of development in this whole way. Yet in actual fact the children themselves show us what is in large part the answer to the problem. They show us what they need in terms of the actual setting within which they grow, and they show us what are for them the most valuable kinds of activity.

The Child's Environment

Observation of the younger children shows us immediately that they develop as do all living things largely in relation to their environment, and that in this environment the people who help to constitute it are of prime importance. In supplying this environment a child's home is at first all-important, and soon school must take its part in supplementing what the home is doing. It is obvious that children are dependent on older people for the provision of their more material environment and of their ordinary means of life in such forms as shelter, warmth, food, fresh air and light. They are also dependent upon them for other less obvious conditions of life and health.

If a child is to be at ease to grow fully then the qualities in his environment must be such as will rouse and satisfy his responsiveness, and not such as will overstrain his adaptability and leave him always in a state of tension. There must primarily be a feeling of dependability in the child's

immediate setting. This dependability is for him based in large part on the love and steady good feeling for him in the people round him; on their orderly planning of his time so as to allow for the regular meeting of his essential needs; and on their reliable management of his behaviour. A child needs, moreover, to live amongst those who welcome and make possible for him vigorous, effortful activity; who are lively in their thinking, and give him the necessary support for his expanding interest and need for information and experience; who are mature in their feelings to the extent at least of being responsive, cheerful, confident and self-controlled; and who are friendly and helpful and ready to welcome his developing independence. The general stability of a child will be found to depend largely on the quality of the grown-ups among whom he spends his time particularly in his earlier years; and from both his stable and his unstable behaviour we can gather much evidence as to the value to him of people of good quality.

The Value of Play

He shows us in addition what is the kind of activity which helps to preserve his balanced, level development from his earliest days. This is the special value of his play. Nothing else can replace for him the all-round value of his spontaneous, effortful activity. In playing he achieves a steadily increasing muscular control, skill and balance. His thinking becomes more and more varied, clear and useful to him. He is able steadily to build a sound basis of satisfied, confident feeling, and finds a ready means of relieving disturbed feeling. And he develops gradually in self-reliance and friendliness, and towards a good balance of give-and-take behaviour. Play of an ever developing kind preserves this all-round value throughout childhood, and in some form can go on serving us in our continuing progress towards maturity.

In practical terms play of this valuable kind takes various forms. The younger the child the more all-round for him is the value of his muscular activity; and through the satisfaction that it gives him it is particularly useful in helping him to establish a genuinely effortful attitude to life. His growing skill with his hands makes possible for him the use of simple yet essential experimental materials and playthings. Very early he plays with water in his bath, and soon can play with it at other times, finding out about its behaviour and its uses. Dough is a similarly valuable play material from early in his life, and, a little later, clay. Sand and earth, something to scribble with and paint to use, bricks, pieces of wood and nails and simple tools, dolls and household utensils, and simple dressing-up things very soon add to the possibilities of this early all-round play. The use of these materials —water, sand and earth, dough and clay, crayons and paint, bricks, wood and tools, dolls and household utensils, and dressing-up things—contributes at one and the same time to the child's muscular skill, to the liveliness of his thinking, the satisfaction and relief of his feeling, and the building up of his

co-operative behaviour. It also forms the basis of the permanent kinds of "play" activity for all people. We can go on using all or some of these materials in an increasingly developed way to the end of our days. We need somehow to preserve the links between early play and later scientific interests, between early play and more developed arts and crafts. Some additions to this provision will naturally be necessary. Children will need music, pictures and books; and they will need to spend time mastering the tools of "reading, writing and arithmetic" so that they can get at more information, relate it together and work out their ideas and their problems. They also need contact with living things, and with other minds which, out of the store of their experience and learning, can contribute to the children's knowledge and understanding. With this preservation and expansion of early play interests, the wholeness and balance of all-round development can be greatly safeguarded.

In short, what would seem to be needed by children for the constant maintenance of balanced development includes good quality of setting, good play, and good learning. The difficulty has been that we have so often failed in the quality of setting that we have provided for children, and in the provision for them of soundly developed play opportunities. A better sense of proportion about the value of good play, and a fuller realisation of the significance of the grown-up in the background of the child, along with continued good help in learning, will do much to restore to children the possibility of an increasingly balanced development.

THE CENTRAL COUNCIL FOR HEALTH EDUCATION

During the past few months the Council has suffered a severe loss by the death of three of its oldest members.

MAITLAND RADFORD, M.D., M.R.C.S., D.P.H.

Medical Officer of Health, Metropolitan Borough of St. Pancras. Representative of the Society of Medical Officers of Health upon the Council. Member of Council 1932–1944. Hon. Treasurer 1935–1941. Vice-Chairman 1942–1944.

JOHN MACMILLAN, D.S.O., M.C., M.B., D.P.H

Medical Officer of Health, Metropolitan Borough of Woolwich. Representative of the Society of Medical Officers of Health upon the Council. Member of Council 1932–1943. Vice-Chairman 1935–1938. Chairman 1938–1940.

EDWIN POTTS, O.B.E., B.Litt., F.C.I.I.

Clerk to the Insurance Committee of the County of Durham. Representative of the National Association of Insurance Committees upon the Council. Member of Council 1927–1943.

HEALTH EDUCATION IN INDUSTRY

By Joan K. McMichael, M.B., Ch.B.

The Need

There is hardly a soul who would not pay lip service to the old precept "Prevention is better than cure," but how many of us ever attempt to put it in practice?

The whole trend of Medicine in this country has been individual and curative, and it is only recently, with the development of the Medical Research Council, the Central Council for Health Education, the Children's Nutrition Council and similar bodies that a new approach is being made towards Preventive Medicine.

The need for early diagnosis to ensure a reasonable hope of cure in such diseases as tuberculosis and cancer is obvious to everyone, and the corollary —a wider understanding and awareness of the nature of the disease and its early symptoms—is only a little less apparent. Yet the attitude of professional secrecy, and the unwillingness to discuss medical matters with the person most involved—the patient—is perhaps more apparent here than in any other country. An example which leaps to my mind was the almost speechless indignation of a young Frenchwoman in Scotland, whose doctor had refused to tell her the name or purpose of an injection after her confinement. She could hardly be convinced that this was the normal attitude to patients, and regarded it as a personal insult to her intelligence! As an anaesthetist in one of the largest voluntary hospitals in the country I have frequently encountered patients who have been quite unable to assist the surgeon in his attempts to diagnose an acute abdominal emergency because they were unaware of the reason for previous operation scars.

The need therefore for Health Education, and the development away from the "Black Magic" approach, to a more rational attitude towards the patient, and his understanding of the problem, is clear. How can that education best be carried out? The Central Council for Health Education is helping to give the answer. Health Education for the individual is valuable, but it should be conceived and developed on a much wider scale, it should indeed be education for all the prospective or potential patients who can be reached by the ordinary channels for knowledge—the mass of the people.

The problem is not a simple one. Even were we in times of peace, without restrictions on paper, there are limits to the amount of education that can be accomplished by the haphazard distribution of leaflets to all and sundry. Hence the great importance of health education in industry, where it is possible to concentrate on large numbers of people in an organised way.

The Practice

In the factory, mine, yard or depot, it is possible to carry out one of the basic principles of education and propaganda by approaching the same problem over and over again, each time from a slightly different angle. It is possible to study the effect of such education on those for whom it is designed, and it is possible also to secure the active co-operation of those who are eager to impart knowledge, and those who are eager to absorb it and use it for the common good.

A general is as helpless without an army as an army would be without a general staff, and health educationists in industry and out of it, are in precisely the same position in their campaign for health. Hence the value of Health Committees in industry. The opportunity for establishing such committees was never more favourable. The increasing needs of production for the war effort, and the effects of health on production, have stimulated interest in health in the factories to an unprecedented level. The result of this has been a natural desire for close and effective co-operation between all those concerned, and the factory doctors and the authorities have found themselves with a volume of organised support exceeding their wildest dreams. Where these Health Committees have been established as Sub-Committees of Works Committees or Joint Production Committees, they are proving the ideal medium for the development of health education and preventive medicine. The Committee usually consists of representatives from the Management, the Medical Department, the Welfare or Personnel Department, the Safety Committee or Safety Officer, and the workers on each floor or section.

The functions of such a Committee are broadly: Health education, Health supervision in relation to working conditions, and the development of prophylactic methods or Preventive Medicine. Health supervision in itself involves a broad knowledge of the Factories Act, and its application to the particular problems within a given factory or place of work. The prevention of accidents and of toxic hazards is only possible through a greater knowledge and understanding of the principles involved, and is the practical application of that knowledge. The development of general prophylactic methods such as Mass Radiography, Vitamin Therapy, Ultra-Violet-Ray Therapy, Cold Innoculation, and so on, can only be based on the widespread support of the majority of the people working in the factory, and that support will bear a direct relation to the success or otherwise of Health Education.

The Method

Although the methods used may show considerable variation and involve many different forms of health education and propaganda, the fundamental need is for unity of theory and practice. Health hints, posters, leaflets and

talks must be expressed in terms of common experience, and must be capable of rapid translation into action. An exhibition, for example, which includes a poster on regularity of habits and which depicts a man with a clock in his gastro-intestinal tract pointing to 8 a.m., loses some of its punch and may provoke cynical comments among factory workers who are usually out of the house and at work by 7 a.m.! Hence the real need for co-operation between experts and laymen. Another outstanding example was a health poster designed to show the structure of the skin with its natural protective barriers, and the way in which these could be supplemented by the use of barrier creams. The poster appeared to me to be as clear as daylight, but when it was presented for comment and criticism by two or three shop stewards on the health committee, there was an ominous and enquiring silence. Consequently, after discussion, the poster was re-designed with the magnified section of skin shown in relation to a hand—a vast improvement. Thereafter I demanded a small sub-committee of laymen to assist me with all publicity, and find it of real assistance in regard to ideas, presentation, and the avoidance of what a factory worker might regard as medical "bad taste." For a factory running a continuous weekly series of health hints this can make all the difference between success and failure, particularly in regard to such delicate questions as mental health, sex or venereal disease.

Health Campaigns

Perhaps one of the best illustrations of the combination of theory and practice in health education has been in the carrying through of actual campaigns, e.g. mass radiography, and more recently, an anti-influenzal campaign. In the former, every method of publicity was used from leaflets in the pay packets explaining the nature of the scheme, to posters and health hints, and attendance of a doctor from the Medical Research Council or from the factory staff at works committee, shop stewards committee and floor shop stewards meetings, to put the case and answer questions. By this means tremendous interest was aroused, culminating in a mass meeting and Brains Trust on the question of tuberculosis and mass radiography, and 90 per cent of the whole factory personnel presented itself for X-ray examination. In the recent anti-flu campaign, which was planned originally in response to a study of the sickness absence records in the factory, and which providentially coincided with the recent epidemic, a series of health hints was issued dealing with parachute droplet invasion and the various lines of defence through good ventilation, plenty of sleep, and various measures of prophylaxis and treatment in the surgery. These were accompanied by the sale of the Central Council's pamphlets on influenza and droplet infections and by broadcast announcements linking 'flu with the need for good ventilation. Thumbnail caricatures of the third line of defence, throat sprays, nasal drops, etc., produced a minor storm in the surgery in view of the shortage

of supplies—a further reminder, if any were required, of the need for co-operation at every stage!

The Future

There can be no question as to the importance of health education in industry, and the tremendous fields for development. Public interest has been aroused and stimulated by the various health problems which have arisen during the war, and most of all perhaps by the proposal for a comprehensive National Health Service made by Sir William Beveridge in his famous report.

The proof is in the number of Health Committees which have been established in industry and which are continually springing up all over the country. The need for co-operation with local doctors, health authorities, and town councils is also encouraging the growth of Towns' Health Committees, as for example, in one small provincial town, where a health conference was recently called to discuss the spread of V.D. in their own locality. At this conference, which had the support of the Medical Officer of Health, a provisional town's health committee was elected with the Clerk of the Town Council, the Municipal Dentist, factory workers and others, to consider a campaign for health education in co-operation with the factories, and the provision of clubs and recreation centres to give the young people and the troops in the neighbourhood facilities for creative leisure instead of the alternatives of the pub, the pictures, or simply the streets.

The people of this country with their own blood, toil, tears and sweat have created the conditions for freedom and progress in every field—they have seen the importance of health in production and in the war effort. Let us hope that those of us who have the knowledge and experience will use it to develop health education and thereby lay the basis for a nation of unrivalled health and well-being in the days of peace.

BIOGRAPHICAL NOTES

Otto Neurath, Dr.Phil.—Born in Vienna. Now Secretary and Director of Studies, Isotype Institute, Oxford. Founder: Social Museum in Vienna. Lectured on Logical Empiricism and the Social Sciences at Oxford University and on Visual Education to teachers, students and children. Author: *Modern Man in the Making*—a picture-text-style book.

Mabel Barratt Ross, M.R.S.T.—Head Mistress of Yorktown Girls' School, Camberley, and formerly of Christ Church School, Virginia Water. Trained at University of London, Goldsmiths College. Published articles on "Sex Education" (*Surrey Teacher*, June, September, December, 1943).

A CONSTRUCTIVE OUTLOOK ON PREGNANCY

By W. C. W. Nixon, M.D., F.R.C.S., F.R.C.O.G.
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In the midst of the present state of planning, it is well that we should pause and ask ourselves whether the planners have conceived the ideal plan whereby the expectant mother will receive the best attention and supervision that is due to her. There is a complacency to be found in certain circles that all is well with the ante-natal services of this country. All must agree that authorities are to be congratulated on the great improvements that have taken place in these services during the last quarter century. But sometimes there is a tendency to relegate the mother to the back of the chorus when she should be the central figure on the stage.

The gross overcrowding of clinics where women are herded together *en masse* is to be deplored. They come in legion to clinics, having been led to believe that failure to attend will result in a difficult labour and even in the loss of their baby. On arrival at the clinic the new mother finds a multitude of women—some expecting their first baby, others old hands—discussing their ailments and the horrors of previous confinements. After a long wait, the dinner hour having passed, she has her first interview with the harassed doctor or midwife. A short history is taken, after which the mother mounts a couch and submits to an abdominal and pelvic examination. She is told to return in a month. She realises that this is not the time to ask those questions which are causing her so much anxiety. She sees that the attendant is either disinterested or overwhelmed with the work. This is not an exaggerated picture of what obtains in some ante-natal clinics. No attempts are made to allay her fears, to give her encouragement and constructive advice, to discover what are her domestic and sociological problems. She and her like are dubbed as ante-natal "cases" or "patients." Mauriceau's dictum that pregnancy is a disease of nine months' standing is perpetuated in such an atmosphere.

Professor Charles McNeil of Edinburgh has aptly referred to the deadening effect of the treadmill of clinics. That such an effect exists cannot be gainsaid. There are times when those working in clinics approach the session in a spirit of frustration, being overtaxed mentally and physically. It is an idle boast to say that one has seen sixty mothers in the space of two or three hours. Ballantyne, who conceived the idea of the ante-natal clinic forty years ago, would never have approved of this conduct and attitude. How

can we relieve the drudgery and monotony of clinic work and at the same time study the personality and reactions of each woman and contribute towards the constructive hygiene of her pregnancy?

Learning while Waiting

The supervision of diet should be one of the primary functions of all working in maternity and child welfare clinics. These clinics are attended by a great number of women who could be instructed in the art of buying and cooking food. It should be possible to establish a food advice bureau in the waiting hall of the clinic. A gas-stove of the type found in most working-class homes can be installed in the corner of the hall. Thus the food can be prepared in front of the women who can take notes, ask questions, collect Ministry of Food recipes, and taste the food until it is their turn to be examined.

Such a bureau was first started in the out-patient department of The Soho Hospital for Women, London, at the end of 1941. Early the following year bureaux were established in the ante-natal clinics of Paddington and St. Mary Abbots (L.C.C.) hospitals. Other hospitals have followed suit. There is no reason why this scheme should not be nation wide. Its success depends on having the right type of demonstrator who must be practical, sympathetic, and aware of the difficulties that beset so many women in the cramped space of their homes. Her function is to advise the women "what to buy, how to buy, and what to do with the food when bought." She should buy the food in the neighbourhood of the clinic, in the district where the mothers live. Again the demonstrator must be fully alive to the kind of purse the mother possesses. In this way can the mothers of this country be educated to make their own essential contribution to one of the greatest measures in public health—proper nutrition.

I would go further and have a milk bar and give the mothers some of the nourishing food which they have seen prepared. The ideal would be communal feeding. Thus would they be the better able to put into practice in their own homes what they have seen demonstrated at the clinic.

Training for Childbirth

Dr. Kathleen Vaughan, the author of *Safe Childbirth*, has for long emphasised the importance of proper training for childbirth. How many women prepare for what is the greatest athletic feat in their lives? Under her supervision ante-natal exercise classes have been in existence for nearly two years at Paddington and St. Mary Abbots (L.C.C.) hospitals. Once a week the classes are held for selected mothers. Limitations of staff and space preclude this service being extended to all who attend the clinics. Apart from the special exercises that Dr. Vaughan has designed, "relaxation" is taught and practised at the end of the session. Dr. G. D. Reid has described in his book *The Revelation of Childbirth*, how fear contributes to abnormal

midwifery. It is by relaxation that fear can be eliminated. Women are now asking to be specially included in these classes after hearing from their recently delivered sisters how helpful they have been. Of course, the exercises and relaxation are practised daily at home. There is an air of jollity, happiness and exhilaration in the exercise room that infects all. They appreciate that they are no longer just ante-natal "cases" or "patients" to be shuffled about like a pack of cards. In the labour ward it is easy to tell which woman has been a member of the exercise class. She is more co-operative, plays an active part in the act of parturition and takes vital interest in all its stages.

Training for Motherhood

The place where mothercraft should be taught is in the school. An excellent scheme is that in force at the Kensington Girls' High School. The Headmistress has arranged with Dr. James Fenton, Medical Officer of Health, that her VIth form girls should attend one of the borough child welfare centres. After a course of instruction the girls participate in the actual practice of the clinic—bathing babies, etc. There is no reason why all ante-natal clinics should not provide such facilities for the schools in their area and thus help to break down the widespread ignorance that young women have regarding the responsibilities of motherhood.

Health Propaganda

In this country there has been a lag in making full use of the educational value of the health film and poster. Why should not the monotony of the wait in the out-patient hall be relieved by a short film. Posters could be exhibited more freely and leaflets distributed. The Central Council for Health Education is doing much to remedy this defect. In the April (1943) issue of this journal appeared two relevant articles entitled "Psychology of Health Publicity" and "The Technique of the Health Poster." One hopes these have been widely read and that the advice in them will be implemented.

Health "pep" talks should be given more frequently by those in charge of clinics. Professor Dugald Baird of Aberdeen has set an example. In his maternity department he gives popular talks to the prospective mothers. These are proving most popular and beneficial to all concerned.

For too long has the purely mechanistic outlook dominated midwifery. As Dr. John S. Fairbairn, past-president of the Royal College of Obstetricians and Gynaecologists, was one of the first to stress, our primary object must be to promote the normal function of the women throughout pregnancy. Those of us who have the care of expectant mothers in our hands must adopt the holistic attitude and constantly remind ourselves that the expectant mother is an individual—the most important in the community—possessed of mind as well as body. Constructive hygiene should and must be the key-note of ante-natal welfare.

THE HUMAN APPROACH TO VISUAL EDUCATION

By Otto Neurath, Dr. Phil.
Secretary, Isotype Institute

The Century of the Eye

To-day frequent changes of the visual scene are a characteristic of our modern urbanised life, which is gradually invading the rural districts as well. Posters call to us from the walls of streets and corridors; exhibitions invite us; millions of people look at the cinema screen night after night; an increasing number of periodicals and pamphlets present new pictures in colours or in black and white; while teachers use lantern slides and other visual devices in the classroom, addressing children and adults.

Network of Visual Arguments

Some of the visual devices have mainly to serve as entertainment, advertisement or propaganda. Others have systematically to bring over some habits and attitudes from one group of the population to another—mainly from the older to the younger generation—in a rather argumentative way. This kind of "transfer" may be called "Visual Education."

One may convey by a visual technique statements on town planning, medical treatment, technical inventions or social correlations, and then combine such "visual statements" to produce "visual arguments," and finally form "chains" of arguments, which may be so interconnected that they appear as a "network of visual arguments."

Symbolic and Realistic Elements

Let us imagine that one wants to discuss the main features of a new dam and its social implications. One may present the building itself directly to a group of tourists, but one will get at many more people by sending round models of the buildings to exhibitions; at still more by using photographs which will find their way into the columns of newspapers or be shown on the cinema screen.

But all these realistic presentations have their limitations. A snapshot may depict labour at work or depict unemployed in a queue for the dole, but one cannot in the same way depict the decrease of a country's unemployment, the increase of goods produced.

Schematic drawings may serve this particular purpose; rows of puppets may symbolise the changing numbers of unemployed, other rows of other symbols the loads of goods in different years. We know such symbols from geographical maps and from architects' blueprints.

The shapes and colours of these symbols and their arrangement, together

with the elements of the photographs in question, create a kind of presentation in a "Visual Language," which can be understood all over the world. We may use a certain "Visual Style" based on a certain "Visual Dictionary" and a "Visual Grammar," when starting to evolve Visual Education as something important in itself.

Visual Co-ordination

This multifold and colourful environment composed of realistic and symbolic elements, asks for some co-ordination, otherwise a bewildering and disturbing visual chaos may develop. Teachers, social workers, health officers and other people concerned with Health Education will therefore need some comprehensive survey of the possibilities in the field of Visual Education.* There is here no space to do justice to the many fine activities performed in the wide field by organisations and individuals.

Democratisation of Arguing

The development of Visual Education, in general, and of Visual Health Education, in particular, seems to be closely connected with the democratisation of arguing. This is especially conspicuous in Health Education, because one expects the active co-operation of the public in any campaign for fighting some disease or promoting some diet. The professional arguments on immunisation or on digestion have therefore to be made plausible. Of course one cannot go into details but one can present the main lines of the arguments and get helpers and supporters in a democratic way. The type of arguing may be the same, irrespective of whether experts or laymen argue on health questions.

Visual Aids—Universal

A book adapted to the man in the street may bore intellectuals, while on the other hand, a pamphlet which speaks to well-educated people may disturb the less educated, who suffer from a kind of inferiority complex when confronted with "high language."

That is the great advantage of visual aids: they appeal to adults and children, literates and illiterates simultaneously—they are universal. There are no "strange" expressions in pictures, even the symbols can be made self-explanatory. Nobody feels "uneasy" or "bored," each picture fully or not fully perceived appears as "complete" in itself to everybody, when carefully prepared.

Visual Aids—Stimulating Activity

A written chapter presents some definite features of an argument. One has to start reading each sentence with the first word—perhaps some "technical

* *Health Education Journal*, July 1943. G. Patrick Meredith, "Visual Education in the War for Health."

term"—and to finish with the last. It needs some energy to extricate first some simpler items of a chapter or sentence and then to acquaint oneself with the remainder.

Looking at educational charts, one may start with the whole picture and then pick out some details which interest one particularly, or on the contrary, one may be fascinated by some detail and later on deal with the subject covered by the whole chart.

This implies not only that visual aids are universal, but that they leave more freedom than chapters in a book, and therefore stimulate the activity of an onlooker much more than verbal expressions.

Visual Aids—Attractive and Informative

A pretty girl smoking a certain brand of cigarette may ask the passer-by from a poster to do the same. Why should not this very girl be successful in inviting him to help fight tuberculosis? Such pictures may find their legitimate place within visual propaganda for health. But I think one will not call such pictorial presentation a sound "visual argument." I think one may add educational devices without renouncing charm—why should "educational" be synonymous with "dull and dry"?

To create visual aids, which are attractive and informative, is a complicated and difficult undertaking, comparable with the composition of a new song or with the designing of a new building. It is not our task here to describe how a team of highly skilled collaborators may combine scientific research, educational abilities and draughtsmanship in producing visual aids and assembling them in exhibitions or books.

Visual Educationalists—Trustees of the Public

"The Public is no Moron," as an American styled it; and even when one thinks of the public as of a mass of rather poorly educated and primitive people, one may regard them as clever and very pleased when learning something without feeling depressed and bullied.

Many exhibitions do not intend to be educational, or if they intend to be educational, they frequently overwhelm the visitors by the amount of unconnected pieces displayed, by clouds of glittering visual details, which sometimes present some trivialities in a rather presumptuous way, within the framework of an impressive general make up of the exhibition. Everybody is in a hurry and has no time to read longwinded explanations. Education needs a sincere selection of material; he who cannot reduce a subject to its very bones without becoming a bore cannot be regarded as a good educationalist. In Health Exhibitions it seems to be vital to catch visitors who are not interested at all in the subject beforehand and do not prepare themselves by reading books. It is just of these people that the "trustees of the public" have to take care.

A Human Start

One can start in various ways in health education, from the personal life of the visitor or from comprehensive views on mankind and its history. To give an example I shall tell something about the preparation of a travelling tuberculosis exhibition.* Usually one started such exhibitions with pictures of healthy and sick lungs. We did so ourselves many years ago. But we found this was a scientist's start—why should the man in the street look at these lungs as something of importance?

We decided to start with a simplified story: a stranger enters a family, infects the husband with tuberculosis; the husband, his wife; the family is growing, some children get tuberculosis, one remains entirely healthy—that teaches the lesson: tuberculosis is infectious, but not hereditary.

Now the human question arises, how to prevent such a fate. In the one exhibition we answered this question from a more individual, in the other, from a more social point of view: "How a community fights tuberculosis."

Modern tuberculosis treatment is based on rest, therefore we started with a wounded finger which heals better when kept at rest by a piece of wood. Breathing implies motion, walking and running about imply more breathing and therefore lying down is better for the patient.

Finally we presented the complete "lung rest"—a pleasant name which covers what the doctors call a "pneumothorax." We depicted this surgical operation in a smooth design with pleasing colours.

We added something about "rehabilitation," which forms part of the treatment. Patients learning a new occupation during their hospital time not only enjoy a new outlook on life, but improve their health by this joy itself.

We had to deal with social as well as purely personal matters. Statistical drawings which are full of social and organisational details sometimes contain a more human touch than a photograph presenting patients enjoying a hospital garden. We have been told by Dr. H. E. Kleinschmidt, Director of Health Education, National Tuberculosis Association, U.S.A., that the public reacted well to these exhibitions. The symbolic schemes, the biological diagrams, the realistic photographs, together brought something of human life to the Red Indians in the North, to the Negroes in the South and to the Whites throughout the country. What might happen to anybody, told in a visual language, is understood by everybody.

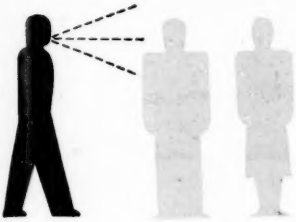
That's Me

It is important that the man in the street should find himself at home in a visual health exhibition. Even things happening abroad should not be presented as something strange, but as something familiar and homely. Human life through the centuries and all over the world has sufficient in common.

* The Isotype charts in this article are taken from material used in travelling exhibitions made in co-operation with the National Tuberculosis Association of the U.S.A. 1939 and 1942.

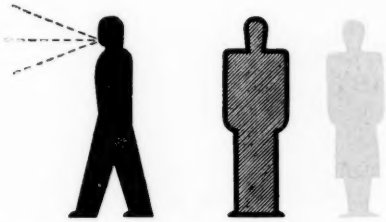
ISOTYPE

Every Case of Tuberculosis Comes From Another Case



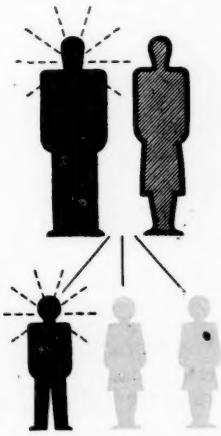
A relative or boarder who has tuberculosis comes to live in the household of this healthy man and wife. One or both are likely to get the disease from him.

One year later.



The boarder leaves the household. The husband has been infected. He shows no signs of sickness.

Ten years later.



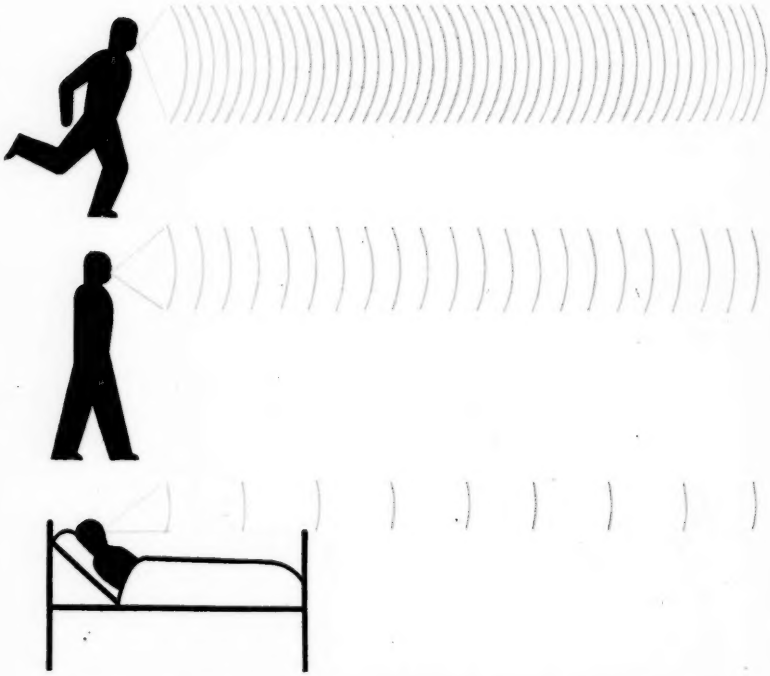
Tuberculosis has spread in the family. The husband is sick with tuberculosis. The wife is infected but not sick. The oldest child also has tuberculosis. The second child is in perfect health. The youngest (with black spot) shows an infection which has healed.

ISOTYPE

Why Rest the Lung . . . and How

Any injured part of the body heals
only if put at rest.

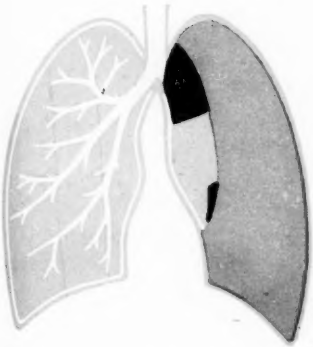
Vigorous exercise makes the lungs work hard.



Rest in bed is the treatment for tuberculosis because body rest eases the work of the lung and gives it a chance to heal.

Complete Lung Rest

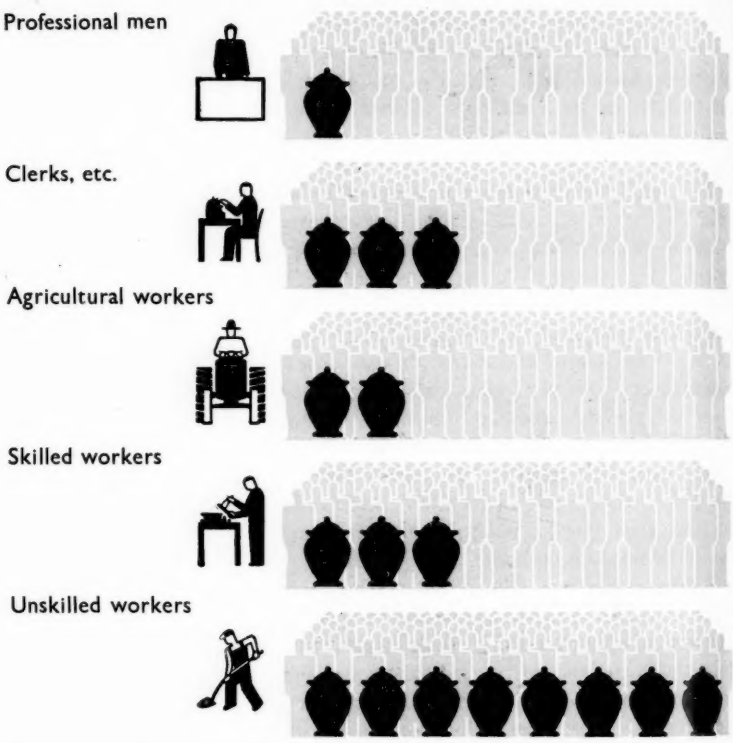
The chest wall is painlessly pierced by a hollow needle, which does not, however, go into the lung.



Air is let in and the lung collapses like a sponge that is squeezed.

When the lung has healed, it is allowed to blow up again. Only the scars remain.

Occupation Influences Tuberculosis



Each urn: 25 deaths from tuberculosis per 100,000 workers in the age of 25 to 44 years.

prepared in co-operation with the National Tuberculosis Association
50 West 50 St., New York, N. Y.

ISOTYPE

In Visual Education we should think of the onlooker's emotional habits, but that does not imply that we have to make charts and their captions emotional. People like to get an opportunity to judge for themselves and to reach their decisions without feeling themselves bullied by "visual dictators," who take care of the public's "visual food."

As "trustees of the public" we may ask ourselves, why a passer-by in the street should be interested in tuberculosis when he thinks that he and his family are quite all right. Sometimes a rather hypochondriac mood induces people to enter such an exhibition. Sometimes a tendency to "self-diagnosis" evolves and we have to destroy it by particular efforts.

Perhaps it would be advisable to start more frequently with the "complete life." When a family rents a house, they are interested in a complex composed of rooms and windows, trees and flowers, view on the street and many other details. They want to know where the fireplace is situated; whether the garden gives sufficient privacy; what the neighbours look like; even the visiting cat just slipping through a hedge may be of importance. You may induce these people to think of the climate in general, and of their health, not only in so far as damp or dry walls are concerned, but also in so far as there are, perhaps, marshes in the neighbourhood. One may gradually bring "morbidity rate" and "mortality rate" of the village into the picture. But I do not think that the plain man likes to start with such unpleasant items. On the other hand, world affairs also appeal to him immediately, and one may lead him from them to public health problems; in no case should we present results of research on health all of a sudden.

There are fine men who devote much time and energy to comprehensive social activities in fighting tuberculosis or other social defects but who are not particularly interested in a neighbour's sick child and his happiness. And others who are busy in their parish as social workers are sometimes not very interested in national institutions which may eliminate some sources of sickness and unhappiness altogether. In Visual Health Education therefore, we have to think of all these various types to give each of them a fair chance, assuming that we want to act as serious "trustees of the public." From any angle the passer-by should feel, when looking at exhibitions or posters: That's Me.

Health and Happiness

Starting in Visual Health Education from the happiness of a community implies looking at the community as composed of healthy and sick people who try to live together as happily as possible, where the stronger try to support the weak and the weak to help the stronger. People who are weak in their limbs may be strong in friendship.

There are not a few of our fellow citizens who feel—and do not like it—that there are experts who are interested in sick people only, hardly thinking

of public health, whereas others make health an idol and treat in a rather merciless way those who do not reach their standard.

Of course, one can take care of health education in a most effective way and still think of the daily routine in helping weak children, the lame, the handicapped and the aged, without giving them the feeling they are just tolerated by their brethren's generosity. Visual aids can create a kind and merciful, or a rigid visual environment.

An atmosphere of mutual help irrespective of the marks one gets in a health contest, may not only make people happier, but also, by this very happiness, healthier from a medical viewpoint. Let us look sometimes at joy and happiness as "Vitamins" of life, the lack of which would endanger our health.

Practical Outlook

In practice there are many organisational difficulties. We have no government departments which deal with the complete human life and its happiness. I do not think we shall get such departments in the near future. We have got health departments of course, but the bulk of health education is in the hands of the school and of many partly voluntary organisations which, devoted to their particular tasks, perform important services to the community.

That, of course, results in some multiplicity of action and sometimes even in competition. An organisation building up urgent health institutions might hesitate, for instance, to present a comparative picture dealing with mortality rates if the field covered by this very society presented a decrease of mortality rate while "competing" societies were fighting diseases with rapidly increasing mortality rate, and would therefore perhaps have more chance of getting the public's money. There are no organisations which deal with the complete life of human beings, with their health and happiness. Nevertheless, we may discuss the approach to Visual Health Education depicted here and perhaps occasionally realise certain of its elements.

Visual Education as such gives the onlooker a feeling that one appeals to him in an international language, which may be understood in all countries. The same visual aids which speak to him here in Britain may reach the Americans, the Russians, the Africans, the Indians and the people in the Far East. Such a feeling prepares the environment for a kind of World Health Education, which could support, and could be supported by, the great international health services already in action. I think also this outlook has something practical in it.

There are many elements in Visual Education which suggest a comprehensive Visual Education Scheme, full of chains of visual arguments and full of ways which lead to a Human Approach.

EDUCATION IN VENEREAL DISEASES IN THE COLONIES

By A. G. H. Smart, C.M.G., M.B.E., M.D., D.P.H., *Medical Adviser to the Secretary of State for the Colonies*

In the Colonial Empire conditions are so varied that it is impossible to make generalisations. These notes will have special reference to conditions in the less advanced Colonies and Dependencies.

Stages of development in most Colonies are so backward that comparison with conditions in this country is not profitable. In trying to plan education as to V.D., therefore we have to adapt our methods and ways of approach so as to be suitable for the people concerned and their stage of development. The diseases within the V.D. group are, of course, the same as those elsewhere, but in a tropical zone wherein most of the Colonies lie, there are some differences in manifestations, associated with climate and other influences; for instance, the incidence of syphilis in some territories appears to be affected by the occurrence of yaws, which, in some not clearly defined way, is related to the former. Some modification in the later sequelae of syphilis is also noticeable.

Differences from this Country

Amongst Colonial peoples generally there is deep-seated ignorance about these diseases. There is ignorance as to their origin and as to later consequences. Thus efforts at education need not assume even partial knowledge of the fundamental facts. Obviously, in the Colonies, education on a specific matter like this should be part of a more comprehensive plan for education and of raising the standard of living generally, for ignorance and poverty are common bed fellows. There is little inducement to raise ethical standards of living in face of a struggle for existence. One advantage in the Colonies in dealing with this problem is that for the most part there is little stigma attached to the occurrence of the disease and hence no veil of secrecy surrounds it; discussion regarding it can be free and untrammelled. In the Colonies we have some other factors that don't arise in the United Kingdom, or don't occur anyway in the same degree. There we have a vast field of territory comprising peoples of every race, colour, religion and outlook, with varying customs, traditions, languages and stages of development. In this country there are varying conditions but not on this gigantic scale.

Venereal Disease is prevalent in practically all Colonial Dependencies; until recent years it was absent from some of the Western Pacific Islands.

As in this country there are concentrations in urban areas, more especially in seaport towns, while in rural districts it is much more sparsely, but more widely, distributed. As in this country, the problem within the two groups has to be handled somewhat differently in each. But in the Colonies there is a much bigger difference between life in the large cities and the primitive conditions in rural areas. When the country dweller migrates to the cities he acquires a different outlook and becomes sophisticated. He loses the simpler and ingenuous outlook of the country dweller and much of the influence of native custom and practice departs. Seaport towns assume a common cosmopolitan character and the occurrence of V.D. amongst certain groups of the population in these towns becomes almost an addiction. The occurrence of the disease amongst all classes constitutes a menace to the native populations but, in seaport towns, a large transitory population has in addition to be taken into account.

The Influence of Tribal Customs

The influence of V.D. amongst native populations is felt at all ages; in some communities it is largely a family disease. With the abysmal ignorance that prevails in most territories there is all the greater possibility for dissemination. A man infects his wife and the children acquire infection through either parent. Where promiscuity exists the chances of infection are multiplied. Where promiscuity substitutes marriage there is an even worse outlook for the family. Sometimes a man is in a position to maintain more than one wife with the possibility for wider dissemination.

It is also a tribal disease, or at least one having serious implications on the tribe, and sometimes on the race. In one East African area considerable concern was aroused some time ago because of the high incidence of V.D. with its effect on the preservation of the integrity of the race. It is only within recent years that there has been amongst this group a recovery in the birth rate sufficient to balance it with the death rate. Similar concern has been felt regarding the high incidence of V.D. in territories like Basutoland and Bechuanaland in its effect on the population figure.

Amongst nomadic peoples the incidence of V.D. is usually higher than amongst those who are settled. For instance the habits of late marriage amongst the nomadic Masai of East Africa, together with other tribal customs, have led to a high incidence of V.D. amongst them as compared with the more settled Kikuyu. Tribal chiefs in certain African territories complain that their young men are attracted to work on the mines in South Africa and that there they contract V.D. which they spread on return to their villages. These men may also acquire an addiction for alcohol which is a factor that encourages the spread of V.D. and tends to lower the influence of native traditions and loyalties.

Any campaign against V.D. must take into account the value attached

to the family circle, to communal life and to tribal tradition. It is by building up on such foundations that real progress becomes possible.

What can be done to ameliorate conditions? Clearly the one way is by removing ignorance. Another is by providing facilities for readily available treatment and a third is by raising the standard of living generally. More attractive conditions of living and employment would furnish less inducement to migrate and reduce one adverse factor, leading to the dissemination of disease.

In regard to education we must have people trained in methods of approach with a knowledge of the simple facts about these diseases. These people must come from the territories concerned. The staff should include a liberal proportion of women trained in this work. Film material must be strictly adapted to its purpose. That designed for this country will be entirely unsuitable for most native populations. A film for Africans should be based on such things as the fondness of the African for his family, on a possible limitation through V.D. of the family because of abortion and possible sterility in the women, on maintaining the integrity of family life, on the wastage that ensues through V.D. to the individual and, if extensive, to communal life, of the risks to the infant and child, on the later occurrence of disease in the adult, possibly on the influence of alcohol in contributing V.D. and the loss of virility in, and possible sterilisation of, the man. Propaganda films should be made locally as far as possible and should be subject to close criticism from representatives of the people who are to see them.

Drawbacks in Treatment

Treatment centres must be available easily and under the charge of people who know how to handle a particular population. The drawbacks in treatment hitherto have been twofold. One is that early and troublesome manifestations may disappear under treatment, which to the native mind indicates cure, and the second is the long-drawn-out period of treatment that is needed. With the discovery of drugs and methods that will ensure more rapid permanent results a vast amount more could be achieved both in this country and in the Colonies. One factor favouring treatment is the desire to maintain the integrity of the race if it is realised that V.D. has a limiting effect and its practical cure can be obtained. One group of the population in British Africa were some time ago reported to be selling their cattle to buy sulphonamides in order to combat adverse repercussions on race propagation. Colonial peoples generally accept Western methods of treatment provided these are available and favourably presented; great faith is often placed in treatment by injection. Health centres are a useful means of ensuring the best results because all activities are centralised here and all elements in the family can be treated in the one place. They form, as well, valuable educational centres and can be established and maintained in isolated areas.

With the dispelling of ignorance and the bringing in of light there will be automatically a trend towards better living. All education on V.D. must take its place as part of a programme of social welfare and better education generally. It is not rational to look for any real advance unless action is taken in some more general way. When a hand-to-mouth existence exists, where malnutrition is rampant, and where the social amenities are lacking it isn't much good pointing an ideal that in practice is impossible to attain.

Effects of the War

The war with its repercussions on indigenous populations has done a lot to educate people to other and better standards of existence. For instance, better and more regular feeding has improved physique for all those men who have gone into the Services, and they will come back to their own villages with clear ideas as to what constitutes better living conditions. We shall have another favourable factor in this and it should be taken advantage of.

But the war has put up the incidence of V.D. especially in seaport towns, and education amongst these communities must have a somewhat different alignment from propaganda designed for peoples in the country. Everything that is possible must be done to provide hostels, clubs and similar amenities for all the transitory population of these towns, as well as for those who are more permanently resident. Much good work has been going on in these directions during the war.

In regard to this question of education in V.D. amongst people in the Colonies and Dependencies we can therefore say that, while the position in some respects, is comparable with that in the United Kingdom, there are many ways in which Colonial peoples need special care and direction. There are favourable factors in the Colonies not found in this country, and appropriate education through suitable agencies should have fruitful results. We know already of some instances where these results have been achieved in very considerable measure.

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Details of fees, etc., obtainable from the I.S.T.D.

THE BIOLOGY OF INFECTION

IV. INFECTIONS FROM FOOD AND DRINK

By Robert Cruickshank, M.D., M.R.C.P., D.P.H.

The last half century has seen a great change in the incidence of infections caused by eating or drinking contaminated food or water. Outbreaks of cholera were common in this country in the 19th century and every year over 370 out of every million of the population died of typhoid fever. Cholera is now unknown and deaths from typhoid are not more than 6 per million. Yet it would be wrong to believe that the ingestion or intestinal infections have been conquered. Typhoid and cholera are predominantly water-borne diseases, and their control coincided with improvements in our water supplies and sewage system introduced during the latter half of the last century. Diseases due to the contamination of food are perhaps as prevalent to-day as they were thirty to forty years ago, and typhoid epidemics still occur (witness the recent Croydon outbreak), while some 3,000 infants die every year of diarrhoea and vomiting. The principal intestinal infections are typhoid and para-typhoid, bacterial food poisoning, bacillary dysentery and gastro-enteritis of infancy, and the problem of their control can best be tackled by considering first the modes of spread and then discussing methods of prevention and control. It may be emphasised again that in contrast to the respiratory infections, the diarrhoeal diseases have their maximum incidence in summer and autumn, due in part to the warm weather which encourages multiplication of the bacteria on contaminated foods, in part to the prevalence of flies, and in part perhaps to a lowered resistance of the defensive mechanism in the host's alimentary tract.

Mode of Spread

Water and Milk. We do not catch typhoid as we catch a cold: we eat or drink it. In the last century when water-supplies were too easily contaminated with sewage, water was the most important vehicle for the spread of intestinal infections. For example, the 1854 epidemic of cholera in London was spread from the Broad Street pump, due to seepage from a cesspool nearby, and this outbreak gave John Snow the chance to prove that polluted water was the usual carrier of this hitherto puzzling infection. William Budd carried out similar detective work on typhoid fever and, as a result, there was a great movement to provide safe water supplies. Soon after, the water-carriage system of sewage disposal displaced the dry privy, the cesspool and the open drain discharging its filth into the rivers from which growing towns were drawing their drinking water. No wonder the populace believed that bad smells bred disease.

The other staple drink, milk, was also shown to be a means for spreading the diarrhoeal diseases, the more so as it supplies food for multiplication of the typhoid and dysentery organisms. To-day, despite great progress in improving the cleanliness and methods of handling milk, milk-borne outbreaks of intestinal infection are still distressingly frequent, while infantile diarrhoea occurs predominately among babies fed on cow's milk.

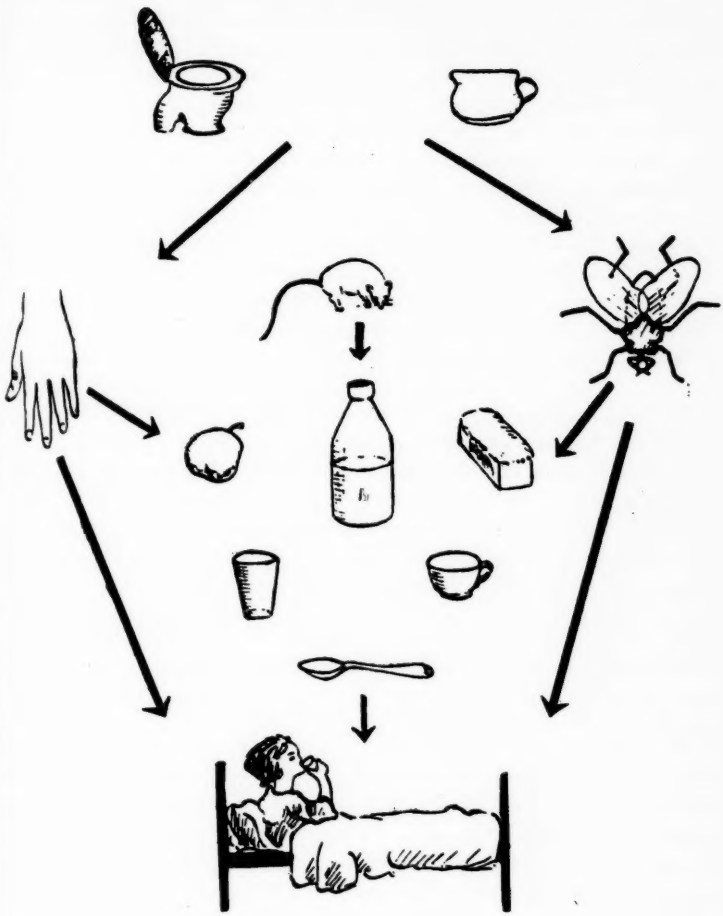
Fingers. Most often nowadays the criminal conveyor in outbreaks of intestinal infection is some milk product like cream or ice-cream, or *prepared* articles of food, e.g. meat pies, minced meat, pressed beef, boiled ham, etc.; in other words, foods that are likely to be eaten without further cooking after passing from distributor to consumer. Tinned food, which in the early days of the canning industry was a common source of infection, is now rarely contaminated before the tin is opened.

The contamination of these prepared foods is done most often by a food-handler (butcher, baker, ice-cream vendor) who may be quite unaware of the fact that he is infectious. He may be a mild "missed" case of paratyphoid or dysentery, or he may be merely a healthy contact carrier. Or again, he may have had an attack of the disease some weeks, or in the case of typhoid or paratyphoid, some years earlier, and is now a convalescent or chronic carrier. No matter what category he falls into, he has conveyed infection from his own excreta by contaminated fingers to the food which you and I are going to eat.

Flies and vermin. Besides the human carrier, the fæcal-feeding house-fly has been shown to be a carrier of intestinal pathogenic bacteria, and may, therefore, contaminate any food on which it alights. Fortunately, the improved methods of sewage disposal and the virtual disappearance of horse-drawn traffic from our cities have been accompanied by a great reduction in the number of these pests. But during the war the collection of waste food has encouraged the breeding of flies, which may be part explanation of the war-time increase in diarrhoeal diseases. Rats and mice, carriers of the "Salmonella" bacteria which cause bacterial food-poisoning, are also encouraged by food salvage and, if allowed access to food stores, will help to spread infection.

Prevention and Control

The food-handler. The channels by which intestinal infections may be spread are obviously more limited and more controllable than is the case with air-borne infections. The control of typhoid, paratyphoid and dysentery is largely dependent on a high standard of personal hygiene among food-handlers, together with improved methods for the protection of milk and prepared foods against infection from human or animal sources. The 1938 Food and Drugs Act decrees that persons employed in a room used for the sale of food are required to observe due cleanliness as regards



THE SPREAD OF GASTRO-INTESTINAL INFECTION

themselves, the room, and all articles in it; while suitable washing-basins with a sufficient supply of soap, clean towels, and clean water must be provided for their use. It will require much patient education to get these regulations observed in the spirit as well as the letter. It might help if all cooks and persons handling food for sale were warned by prominent notices of the essential necessity for hand-washing after use of the w.c. and for reporting to their employer any attack of diarrhoea, however mild. The protection by impermeable wrappings of prepared foods against soiling by hands, flies, and vermin also needs to be greatly extended. The breeding of flies and vermin would be greatly reduced if every housewife saw to it that no waste food was left accessible to these pests, and if salvage bins all had tightly fitting lids. Undoubtedly dirt breeds disease and there is point in the old saw that "cleanliness comes next to godliness."

Breast feeding. If infantile diarrhoea is to-day a minor scourge compared with the major epidemics that used to occur every summer, it still is one of the principal causes of infantile mortality, ranking third to neo-natal disease and pneumonia. It is predominantly an infection of artificially-fed infants living in urban poor-class districts. The bulk of the deaths occur in the first year of life, and there is little doubt that the disease would practically disappear if all mothers breast-fed their babies for six to nine months. The fact that only 30 to 50 per cent of mothers feed their infants for even three months is due to a variety of causes. A longer period of rest after confinement, more home help, proper feeding of the mother, the care of the nipples before confinement, more frequent and complete emptying of the breasts during feeding to stimulate lactation and prevent infection through milk-stasis, and, in particular, education of both doctors and the lay public about the advantages of breast-feeding, would all help to secure larger lactation, and thus save a large proportion of the 3,000 infants who die every year because they are not breast-fed.

Immunisation. In wars before the 1914–18 war more men died of disease than on the battlefield, and typhoid was one of the principal contributors. During the South African war Sir Almroth Wright introduced vaccination against typhoid, and in the 1914–18 war when most of our troops were inoculated with a mixed typhoid and paratyphoid vaccine (two injections at an interval of one week or more) deaths from these diseases were relatively rare. So it is in the present conflict and typhoid has now ceased to be a pestilence of war. In normal times the risk of contracting this infection is so small that prophylactic vaccination is not recommended for the general community. Only nursing and medical staff in fever hospitals, and those going abroad to countries where typhoid is endemic are vaccinated. But in time of war the risk of getting typhoid may become considerable if water supplies and sewage systems are damaged, so that mass immunisation of civilian communities may become advisable. Vaccination against the other intestinal infections is not at present a practicable procedure.

SPEECH

By Elsie Fogerty, C.B.E., L.R.A.M.

A true standard of speech contributes largely toward success and happiness in life. It removes self-consciousness in the speaker and ambiguity from his speech; and it calls out acceptance from the listener. In addition to being a satisfying means of self-expression, speech is a co-ordinating faculty which enables an individual to convey to others what he has seen or heard, thought or felt.

In considering speech, it is vital to distinguish linguistic content, utterance, and expression. Linguistic content means more than the mere possession of a large vocabulary: it means, too, the ability to link words into phrases and sentences which are coherent, lucid and expressive. Utterance is the physiological production of sound; expression gives colour and emotional conviction to utterance. The individual who fails to reach a reasonable level of achievement in these three requirements of good speech always gives an impression of inferiority.

True speech training should, however, preserve good dialect forms and not try to destroy them. "Good" dialects will always be found to have obtained lyric or dramatic expression. They have a beauty of their own, and children speaking them should be made bi-lingual, so that, while able to talk easily to any standard English speaker, they can enjoy the use of their own idiom and native variety in local speech, in song, and in verse, so finding a pleasant means of self-expression.

The Development of Speech

Among all our faculties, that of speech alone has no existence without deliberate imitative training. Speech in infancy begins as an instinctive, audible, motor action. For the first week or two the cries of fear, hunger and anger cannot be differentiated by the hearer. Then the child is able to focus his expression more clearly. He cries when hungry and makes soft gurgling noises when fed or happy. This early stage of utterance is purely instinctive sound production; a reflex action. No child has ever heard its parents gurgle or squeak. Then follows the acquisition of single words by imitation only. The people who speak to the child should therefore speak clearly and distinctly. If the mother fails to realise how difficult it is to develop articulate movement and speaks too rapidly for her child to follow, there may be delay or "cluttering" in the child's development of speech as it tries to imitate the rapid pace of its mother's quick utterance. Speech may also be delayed if it is interrupted by fear or by repression. Thousands of speech disorders might be prevented if parents only recognised that speech is a highly complicated and artificial process which entails more exact muscular and nervous co-ordination than any other normal function.

Errors and Their Correction

Errors springing up at this stage take a long time to remove. Common instances are lisping and "rotarism," or a failure to form the sound of "R" correctly. If a child speaks incorrectly, therefore, the adults around it should do what they can to help the child very gradually to overcome the difficulty; not by direct correction but by amusing games. The child learning to speak should never be scolded for speaking incorrectly. For example, when trying to overcome rotarism, parents should never tell a child to roll his "R's": instead they might play the game of trying to purr like a cat. Children will adore to do this and will practise it with great joy. At all costs avoid making the child self-conscious about speech. If a child stammers he should never be made conscious of the fact. The origin of stammering in nervous children is due to the constant nagging correction of small articulatory errors. Particularly is this so at the stage of second dentition, when no child can articulate clearly but none should ever be given conscious correction. If the defect shows signs of developing, its correction is the task of the speech therapist, and the child should be sent to a speech clinic where the proper treatment can be carried out. Direction for the best way of diverting the child's attention from his trouble will then be given.

Although the child begins by being imitative in speech, it is not long before he reaches the stage of associating words with the objects to which they refer. Later when he begins to read there is an enormous increase in his vocabulary and an extension of his mental experience. Nevertheless, it is a mistake to take linguistic facility in writing and speaking as the major test of intelligence. In schools where this method is used the boy who reads, writes and speaks above his age tends to go up the forms too fast; on the other hand, the boy whose interests lie in other directions may be left behind and so become discouraged. If this is done the types are intensified, which is, of course, a mistake in education.

Tragedies of Oversight

Care must be taken, too, to see that speech defects are not confused with mental deficiency. The defects which are most likely to cause this confusion are "word blindness" and "word deafness." Consequently, teachers should always be on the look-out for the possibility of these defects in children who, while alert in other respects, are seriously backward in reading or in speech. Children suffering from these conditions are quite different from the mentally defective child in their appearance and behaviour, but if the conditions persist undetected they experience great humiliation and may turn in upon themselves so that all their other processes suffer through inhibition. It is a tragic thing if a teacher, through failure to recognise these conditions, labels as mentally defective a child who is in fact mentally quite normal but suffering from some speech defect which is curable under proper treat-

ment. Such cases should be tested at a hospital speech clinic. Many speech defects develop first at the time when the permanent teeth are making their appearance at the ages of six, seven or eight, and at that time a stammer may easily be set up by ill-advised school correction. Another difficult period is that in boys at puberty when the instrument used for vocal tone—the voice—is altering. As a consequence many boys become self-conscious at this stage of their development. They require sympathetic handling and on no account must attention be drawn to their vocal peculiarities.

There is no doubt that anything we can do to encourage the highest possible development of a child's speech will help to enrich his personality and to increase his emotional and mental balance. The adults surrounding the child should therefore at all times behave in such a way as to encourage him to overcome as soon as possible the obstacles to proper speech which arise at the various stages. Parents should never use baby talk, they should talk in ordinary English. They must not treat mistakes as wilful errors, nor laugh at a good speaker for "talking fine." They should habitually read aloud to him with good utterance and simplicity. On the positive side the child should be encouraged to use speech in happy and satisfying ways. Acting, verse-speaking, etc., are excellent ways of finding this outlet. Contrary to popular belief there is no nation in the world so ready to act as the English. Dramatic instinct is the gift of the English nation and it can be used to great advantage in speech training.

Speech and Personality

It should be remembered that speech plays an important part in every stage of the child's development and in the growth of his personality and that before he leaves school every child should be given at the very least an occupational standard of speech. Here a real danger arises—the tendency to uniformity. This can be avoided only by allowing each person to achieve his natural quality of speech in physical utterance and in vocabulary.

There is all the difference in the world between tuning and playing a piano. Our job is to "tune" the instrument of speech—the voice—and then to teach the child to use his own instrument to the greatest possible advantage. The more successful we are in perfecting the instrument, the greater the freedom we give the individual to express his personality in speech without self-consciousness.

The emotional side of speech must not be lost sight of, but particularly with boys it must not be overstressed. Ill health or a natural nervousness have adverse effects upon speech, and in turn an unsatisfactory speech damages the personality and may, through the emotions, lower the general health of the individual. This applies particularly to bad vocal tone. For personal and social reasons, therefore, speech training is very important in ordinary education, and we must aim at a high standard of speech for all. Really serious defects should be referred to the speech clinic.

A PRACTICAL EXPERIMENT IN HEALTH EDUCATION

By Mabel B. Ross, M.R.S.T., *Headmistress Yorktown Girls' School, Camberley*

Need for Experiment

The publication of the White Paper on Education has focussed public attention on the need for educational reforms involving drastic changes, to which are closely allied other problems much in the minds of thoughtful people.

Repercussions of the propaganda about venereal disease are felt in the teaching profession, where the subject of sex education is increasingly under consideration. By wireless, press, and cinema the evils of sex abuse are being freely discussed, and the question arises: "Are the children now at school to receive their knowledge of sex from unsatisfactory sources, and if so what will be the psychological effects on the parents of the next generation?"

Venereal disease, increase in the birth rate, infant mortality, child welfare —all are linked with education and teachers cannot afford to wait for projected reforms to become operative while thousands of adolescents are leaving the schools every term.

Private schools are often advocated for the purposes of experiment, but it is not always recognised that a great deal of experimental work can be, and is being, carried out in public elementary schools. To the Heads of these a large measure of freedom is allowed; they are not bound by School Leaving Certificate or other public examination syllabuses, and are not concerned with finance in respect of school fees from individual parents. The old days of external pressure by His Majesty's Inspectors have in most areas disappeared, and a spirit of friendly co-operation marks the relationship between these officials and school staffs.

The following account of a year's work in an ordinary elementary school, with an age range of seven to fourteen, may indicate one way in which some of the problems referred to can be faced even at an immature age; and may suggest possible lines of development when the leaving age is raised. There will be urgent need for new work for which plans should be prepared now, and recognition of this may prevent the collapse of hastily devised schemes. Recently a parent remarked to the writer *a propos* the proposed raising of the school-leaving age, "Perhaps the young people themselves won't stand for it." It behoves us to make sure that when compulsion is applied, the work arranged satisfies real needs and is not a mere prolongation of existing schemes in the same rooms, by the same teachers, and with younger children in the same classes.

Sex Education

With the consent of the parents, not one of whom took the opportunity offered to withdraw pupils from the class for these lessons, a course of sex

instruction was introduced into the curriculum last autumn. For the eleven and twelve-year-olds it formed part of the normal biology lessons, while for the thirteens a year's work in Social Biology was arranged. In the first term the seniors had lessons on reproduction, and the need for precise teaching was soon apparent. Few girls of this age are entirely ignorant, but many have accumulated a store of superstition and error which has to be heard to be believed. That child-birth involves serious surgical operation is a common belief, and this and other misconceptions, if not cleared away, may have a tremendous influence on wives of the future.

Problems of sex behaviour inevitably arise when questions are freely welcomed and confidence is established between teacher and class, and much incidental teaching occurs in other lessons once the physical facts are known, and there is no desire to skirt round the awkward passages. Following this course, in a Scripture lesson, a girl asked when they were reading the parable of the Prodigal Son the meaning of "harlot." This provided the opportunity to give the modern word "prostitute" and to help the class to realise how much more than his father's substance the younger son had lost in that far country.

Visits to Nurseries

The second term's work was to have been introduced with lessons on the care and development of children under five, but the interest of the previous weeks was not maintained. Theory without practice is dry bones, and few of these girls had direct contact with children of this age. Hence while lessons planned for later in the course (on such subjects as Public Health Authorities and their work, clinics, school medical services, etc.) were taken new plans were devised. During the war both a residential and a day nursery school have been established within easy reach of the school. The heads of these were consulted, their co-operation obtained, and a scheme submitted to the Local Education Authority for approval which was readily given.

It was arranged that the girls leaving school this year should, in turn, spend a morning each week in each of these schools helping with the little ones under the supervision of nurses and teachers. Four at a time went to each, and in the afternoons these eight girls contributed to the class lessons on the care of under fives.

Much of the work was in the form of discussion, the younger members of the class who had not yet visited the nurseries taking part and frequently asking questions. In addition to the physical care, clothing, washing, and feeding (the girls assisted with the serving of the mid-day meals), study of child behaviour and methods of training were included.

The training of these very young children in habits of cleanliness and independence was a surprise to these older girls, who started out with the

idea of doing everything for them. Dr. Susan Isaac's book *The Nursery Years* was in much demand for home reading, and the food values of the meals supplied offered a further subject of study which might in future be linked with the domestic science classes. In these ways much practical mothercraft was learned at first hand.

In addition, weekly visits were made two at a time to the Child Welfare Clinic, where with the valuable co-operation of the school doctor and nurses girls were allowed to assist in the weighing and dressing of tiny babies and become acquainted with this important public service.

Pride in Achievement

The enthusiasm of the girls was maintained throughout the term; they loved the nursery and clinic days, and this link between nursery and senior schools has been a great asset. Not least important was the unexpected enthusiasm of the Heads of these institutions, who derived much pleasure from helping their young visitors and also found them really helpful. Particularly was this the case in the residential nursery where staffing difficulties were sometimes acute and girls of fourteen were found sufficiently responsible to be trusted with the supervision of small groups. Several girls formed the habit of dropping in at odd times on Saturdays and Sundays, asking permission to take two children for a walk and take them home to tea. These evacuated infants thus had experience of normal home life and hard-pressed nurses were given an easier afternoon.

The care of under-fives must always be an onerous and demanding task, and while schoolgirls cannot be used in lieu of adequate staffs, they can be of service by this occasional help when they have proved themselves trustworthy. Their own pride in being so used and sense of achievement in having successfully looked after their charges are valuable for their own training, and particularly is this the case with the girls who are not very good at purely academic work. The dull and backward girl who risks leaving school with a sense of inferiority may find her whole attitude to school work altered when allowed to give service in this way. The same sense of satisfaction is felt by the member of a domestic science class who tells one with pride that mother is having an easy morning as she is cooking the family dinner at the school centre.

New nursery schools are being established all over the country, and if they can form links with the senior schools in each district it may be possible to plan work which will form a useful feature of the additional school year. Beginnings should be made now so that errors can be righted and difficulties discovered before the new classes are formed. Above all, the present generation which still has to face the world at fourteen, can be given some help and guidance relative to present-day problems.

DIFFICULTIES OF SEX ENLIGHTENMENT

By Anna Freud

In a former article on "Sex in Childhood" (*Health Education Journal*, Vol. II, No. 1), I have attempted to show that the child's right to receive sex instruction is based on the existence of an early infantile sexuality. It is our next task to define in what way the various stages of development of this early sex organisation influence the child's ability to understand sex matters.

Sex Interest—The Normal Sequence

Sex curiosity, as described before, is a normal element in the child's development. It begins in the first year of infancy as a general and diffuse interest directed towards the child's own body. The various parts of the body which are the infant's first play-things and sources of pleasure, are at the same time his first objects of exploration. The mother's breasts, face and hands, whenever accessible, are treated in the same manner and explored and investigated. The various body openings (mouth, anus, nose, ears) are the next centres of interest. The first questions which the child asks in his second year are usually concerned with the use of his navel and his nipples. Interest in the processes of urination and defaecation, and curiosity about the child's own excrements and those of others (people's or animal's) invariably fill the first years of childhood.

All children between one and five will at some time or other show active curiosity about such matters as the difference between the sexes, the question of where babies come from, and the mystery of parental intercourse. But the chronological order in which these interests appear will to a large extent be determined by outside circumstances and events. The fact whether a child shares the parents' bedroom or sleeps separately will either stimulate or retard his investigations in this particular direction. Children without brothers and sisters, or those who are the youngest in their families, enquire where babies come from later than do those whose curiosity is aroused by the arrival of a new baby in the family. Where boys and girls live together in families or nurseries, with ample opportunity to see each other's naked bodies, their interest in the difference between the sexes exists from the beginning and expands naturally and gradually. Children who lack such opportunities and are suddenly, and without preparation, confronted with the sight of the naked genitals of the opposite sex, may be overwhelmed by this unexpected discovery and be overstimulated in their curiosity in this respect. Chance observations of the mother's menstruation, operations (circumcision, tonsillectomy, the removal of adenoids, etc.) give rise to the

anxious question in the child's mind whether it is possible to be deprived of valuable parts of one's body.

Fixed Plan Impracticable

It is this variation in the order and sequence of the subjects towards which the child directs its sexual curiosity, which makes it impossible to lay down any fixed lines for the giving of early sex instruction. Parents cannot determine beforehand, therefore, at what ages their children should be made acquainted with given sexual facts. The child's curiosity will demand satisfaction as it arises. At this early age children have little use for objective sex information; they quickly discard knowledge which is, at the time, not connected with their own subjective interests.

The Meaning of Behaviour Changes

Parents, who desire to give their children steady and consecutive sex guidance, are thus confronted with the task of closely observing the child's individual development, and of following the movement of his curiosity from one problem to the other. The actual questions of the child, on which parents would like to rely, do not always afford safe guidance in this respect. Many children are inarticulate; they are unable to voice their curiosity, though they express it indirectly in various manners: by their anxieties, their distress, and their behaviour problems. Little girls, for instance, who at the age of two or three see a boy's genitals for the first time and compare them with their own, often become moody and depressed, and anxiously watch their bodies for all possible imaginary defects. This behaviour means that they have interpreted the difference between the sexes as a sign that something is wrong with themselves, and that they react to this impression, even when they do not talk about it. Their behaviour should be treated as if it were a question directed to the parents and should be answered by an explanation. Similarly, boys may react with worries, moods or difficult behaviour when they compare their own bodies with those of bigger boys, of men, of circumcised playmates, or with girls; again instruction is needed, though no question has been asked. Children usually react to the mother's pregnancy with behaviour problems (resentment, aggression, disobedience) before they ask any questions; the need for an explanation is implied in their behaviour.

Even where children are more articulate, the questions asked do not always coincide with the questions in the child's mind. Empty and apparently meaningless strings of questions concerning all possible matters under the sun, always hide a kernel of disguised sex curiosity. In these cases it is the task of the parent to lead the child's investigation back to the place in which it has arisen, namely to its sex interest.

Gradual Instruction Best

Instead of ready-made formulas for sex enlightenment given at specified times, children thus need a steady and gradually expanding supply of explanations, carefully adjusted to the times when inner development or outside events give rise to the need for it. Sex instruction in this way naturally begins in the second year with the simple naming and explaining of the uses of the various parts of the child's body in which he shows interest. It continues with simple explanations about the bodily functions. The proper time for instruction about the origin of babies is indicated by some incidence of birth, whether in the family, or in the neighbourhood, or with domestic animals. Instruction in sex differences has to follow the child's own independent observations in this respect. The necessity to give instruction about parental intercourse and the father's role in it, is normally indicated by a heightening of the child's jealousy about the parents' intimacies. Wherever the parents succeed in instructing the child with ease and sincerity, they see to their own gratification that the child responds gratefully and with further confidences.

Normal Difficulties

But even where sex enlightenment is, in this manner, carefully adjusted to meet the child's requirements, its course never proceeds smoothly and without obstacles. Parents are often impressed by the immediate intelligent reaction of the child to their explanations, by his eagerness to grasp and further to apply the information. But it happens regularly that the same explanations, which the child fully understood at one moment, are completely forgotten a short time afterwards. Children, for instance, who have been informed by their parents about the facts of birth, suddenly deny all knowledge of it or, some years later, even accuse their parents of never having told them anything. If the natural explanations about pregnancy, birth, sex differences, are not repeatedly given, or applied continually to related subjects (for instance in the plant and animal world) the children will periodically forget all about their knowledge, and behave like children from whom sex instruction has been actually withheld.

A further striking fact is that children, though perfectly able to understand the biological facts when they are explained to them, invariably distort and misunderstand them when they are once in their possession. The same children who have listened with gratification to the explanation that babies grow in the mother's womb, who have apparently understood the father's role, who know the naked body in its childish and adult forms and are well informed about the different functions of the sexes, will suddenly betray the crudest and most phantastic beliefs about the same matters: that girls are really mutilated boys, whose penis has been cut off as a punishment; that babies are born through the anus like a piece of excrement; that babies are

born between the mother's breasts; that babies are born through the navel, or through the mouth; that babies are conceived by eating certain kinds of food; that father and mother mix their excrements together to produce children; or breathe into each other's mouths for the same purpose; or that the father urinates into the mother; or cuts her with a knife so that she bleeds; that the parents fight at night in bed, and that the father hurts the mother.

It is as if in the child's mind these phantastic and distorted representations of sexual events compete with the natural biological explanations. The child, though able with his reason to grasp the biological facts, reverts periodically to these other explanations which he shares with his playmates and which are confirmed to him by many of the well known fairy tales. Parents, who see their efforts towards proper sex instruction frustrated in this manner, often become discouraged and abandon their attempts. They feel that they have failed; that young children after all are not mature enough to accept the truth; and that perhaps, the old fashioned lies (the stork, the gooseberry bush, the doctor's bag) are more appropriate for that age than biology.

Origin of Infantile Sex Theories

But it would be wrong to ascribe the persistence of these infantile sex theories either to the bewildering influence of fairy tales, the stories told by unenlightened playmates, or to the weakness of the young child's reasoning powers. The real source of these childish beliefs is to be found in the child's own emotional and instinctual experiences while passing through the various phases of his early sex life. With his intelligence the child of three or four years can understand the facts of adult sex life, but emotionally he can only grasp whatever is attainable to him through his own experience. This means that at every stage of pre-genital development the child translates the sexual facts, offered to him in terms of adult experience, into the emotional language of the phase which he has himself attained. So far as the child's mouth is a centre of sexual pleasure (*oral sexuality*), babies are thus believed to be conceived and born through the mouth. At the period when the anus and the processes of defaecation are of foremost sexual importance (*anal sexuality*), babies are believed to grow in the intestines and be born through the anus. When the genital zone (*phallic sexuality*) assumes importance (between three and five years), the child cannot conceive the idea of a human being born without a penis. The *sadistic* tendencies which play their part in all the three stages of infantile sexuality are responsible for the way in which the child misunderstands the sexual act and conceives of it as a fight. This means that each of the bewildering infantile sex theories is, on closer examination, found to be based on one of the infantile sex organisations.

Sex Instruction as Part of Sex Education

Parents, in their efforts to give sex enlightenment, are thus confronted, not merely by the ignorance of the child, but by the action of strong instinctive and emotional attitudes which correspond with the changing phases of the child's development. It is the aim of all real sex education to guide the child safely through the various stages of pre-genital development with its perverse infantile tendencies and activities, towards a safe arrival at the genital level, when all the sexual strivings of childhood will be integrated under the leadership of the genital impulses. Similarly it ought to be the aim of all proper sex instruction to accompany and guide the child through the distortions and misunderstandings of sexual facts which arise on the basis of its sex experience. As pre-genital sexuality is gone through and overcome slowly and gradually, the phantastic infantile sex theories will, equally gradually, lose their hold, fade into the background, and leave undisputed ground for the natural biological explanations which the child receives. To be shocked and discouraged about the existence of such beliefs in the child, would be as futile as to be shocked and discouraged about the existence of an infantile sexuality as such. Sex education and sex instruction are not two separate efforts towards the upbringing of children; they are one and the same process.

The Educational Pamphlet of the Board of Education on Sex Education (No. 119) repeatedly stresses the point of view that sex instruction should be given at an early age "before strong emotional associations develop." In the light of the psycho-analytic conception of infantile sex curiosity and infantile sex development, it appears that there is no such time in the child's life. The emotional associations with the subject of sex knowledge vary according to the grade of development which the child has reached; they are never absent. Sex instruction will be far more successful, when it is not merely offered as a superficial intellectual superstructure, but when, step by step, the connections are established between the biological facts on the one hand and the gradually evolving emotional attitudes in the child's mind on the other hand.

Early childhood is the right time for the beginning of sex instruction, not because "an emotional atmosphere has not yet developed"; but because the emotional atmosphere surrounding sex at this period calls for help and guidance. The individual's sincerity and naturalness towards questions of sex in adolescence is as dependent on the way in which he has received his early sex instruction, as his sexual behaviour of the future (his "understanding and control of sexual impulse and emotion"), is determined by the ways in which he has been guided to deal with the pre-genital sex impulses of his early childhood. But the latter correlation, again, lies beyond the scope of this article.

PHYSICAL EDUCATION IN THE FUTURE

WAR conditions have in general severely curtailed the progress of physical education. Many men teachers are in the Services, buildings have been bombed, baths commandeered, playing fields ploughed up or left unmown, and suitable shoes and clothing are fast disappearing. Yet a fundamental advance has been made in the greatly increased provision of school meals and milk, and, although this advance is not known as Physical Education, it is true to say that a wide conception of this branch of education must include nutrition as an important factor. The Education Bill imposes upon Local Education Authorities the duty of providing milk and meals. We shall build all the better for this foundation. This is only one of the many ways in which the Education Bill will produce a vigorous impact on that aspect of education which is labelled physical.

Many children, entering the Infant School at five years old, are reminiscent of old men and women as far as activity is concerned. They are often over-clothed and cannot move freely because of their clothing, while they are quite helpless in the business of dressing and undressing. The lack of activity is often due to cramped urban and suburban homes and to unsuitable and superfluous clothing. The helplessness is due to the mistaken devotion of many mothers who wait on their children hand and foot in a really literal sense. Children reaching the Infant School *via* the Nursery School tend to be more active and independent, and any defects are likely to have been noticed at an early stage with a good chance of complete cure. Further, the Nursery School has often educated and obtained the co-operation of the parents so that the children have developed sound habits with regard to many health matters with a sensibly robust attitude towards activity and fresh air. It is good to learn that nursery education is to be encouraged.

Mass Production or Education?

Referring to the teacher's task in handling a class of 50 children the White Paper which foreshadowed the Bill stated: "This is not education but mass production." Precisely; and physical education has in the past too easily accepted the idea of mass production. Uniformity has been one of its watch-words. The difficulties of exercising a class of fifty children simultaneously are not much greater than those involved in a class of thirty, so long as the teacher is merely content to provide some sort of activity. If, however, the conception of the lesson is that of education through movement, with opportunity for children of diverse physique and character, a large class presents a most difficult problem. It will be interesting to see whether

physical education can seize the opportunity provided by smaller classes and concern itself less with mass production and more with education.

The Education Bill proposes improvements in school premises to meet the needs of pupils of varying ages, abilities and aptitudes "including practical instruction and training appropriate to their respective needs." Many classes must at present carry out their physical education, so far as actual lessons are concerned, in the playground if it is fine, and in the classroom, or not at all if the weather is bad. Consequently continuity is impossible, and it is probably true to say that for half the year many schools without indoor facilities do not pursue their schemes in physical education, though there are heroic exceptions. Where there is indoor space matters are usually very different, but a large well-ventilated room with a clean floor is a rarity.

P.T. and Health Habits

There are schools where, despite their cramped classrooms and inadequate cloakroom accommodation, the children change completely for their P.T. lesson with effects on health and cleanliness which are not restricted to the lesson alone. In the more spacious days which it is hoped lie ahead this practice may well become general as difficulties are reduced.

The changing of kit and desirable ablutions associated with the P.T. lesson take time. In infant schools this time is often regarded as well spent. The children learn to dress and undress themselves quickly, to fold their clothes neatly, and to wash and rub down thoroughly, but in the Junior School the battle of the 11-plus examination begins and physical education and all that appertains thereto must fight for precedence with the three R's.

New methods of selection and the provision of secondary education of various types for all children will surely change the face of the Junior School. Children of this age seem to have an almost insatiable appetite for activity; it may be hoped that in the future this will be better satisfied, and that the languages of movement, music and craft will play an equal part with those of number and words in the development of the child. The "frills," we may hope, will become part of the fabric.

Belated Beginners

At present two of the most promising fields as far as physical education is concerned are the Infant School and the Modern or Senior School. Both are free from the millstone of an examination, and the recently built Modern Schools provide indoor facilities including gymnasia, showers and kit storage rooms which are at least the equal of most modern Secondary Schools. It is only in the acreage and standard of maintenance of their playing fields that many Modern Schools fall short of the standards maintained in those schools still labelled "Secondary." But even the best equipped Modern School has a heavy task. Children come to them at 11-plus from schools where, for

reasons given in the previous section, physical education has been interrupted. It would be no exaggeration to say that for many of them physical education begins with their entry into the Modern School, and they are certainly strangers to apparatus for climbing and vaulting, and to showers. Many, therefore, are virtual beginners just before the onset of puberty, and they remain in school, on an average, for just over two years. Despite the fact that the well-equipped Modern School usually gives physical education a prominent place, and does good work, the time is short and the period of life a difficult one in which to establish good habits and attitudes. The raising of the school-leaving age will increase both opportunity and responsibility—opportunity for more effective education, and the responsibility of providing it for the critical adolescent. A child of Primary School age gets a great deal of satisfaction from movement of any kind, however crude; but the adolescent is far more exacting, prone to embarrassment, and hungry for the acquisition of skill and poise however much appearances may be to the contrary.

The newly-built Modern Schools apart, there are the vast numbers of children in reorganised schools in old buildings and an even greater number in schools which have not been reorganised at all. The Education Bill promises better things, however, because it is proposed that every Local Education Authority should estimate the needs of its area and make and submit a development plan covering those needs.

Limited Advantages

The White Paper stated that "Under present conditions the secondary school enjoys a prestige in the eyes of parents and the general public which completely overshadows all other types of schools for children over 11." There are many reasons for this; among them are the selection of pupils, length of school life, pay and qualifications of the teaching staff, and the standard of premises and equipment. Physical education has shared in all these advantages which make, on the average, for far better opportunities than exist in elementary education. But there is a factor which outweighs these advantages, that of the School Examination system and its effect on education. Physical education, though indeed it may well be a factor leading, through improved health, to success in the examination room, is not an examination subject and tends to be squeezed out to the point when it can have only a very limited effect. However a fresh spirit seems to be abroad. The Norwood Report, referring to the School Certificate Examination states—"The examination in its present form is having a cramping effect upon the minds of teachers and pupils." In the section devoted to Physical Education the Committee states "We have been impressed by the strength of the evidence put before us in favour of a daily period of organised physical activity, whether this takes the form of physical exercises or games or other

activity." It is true that this statement is followed by a warning concerning varying circumstances and fatigue, but the attitude of the members of the Committee towards physical education is that it should play a full part in the education of young people.

The third type of secondary education is to be provided in the Technical School or College where, to quote the White Paper again, "standards of buildings and equipment in use have often been deplorably low." These low standards have applied equally to physical education, and it may be supposed that, with the progress foreshadowed for technical education there will be a corresponding advance in this particular aspect.

The Follow Up

There has been much adverse comment on the fact that few young people who have left school take any further interest in their education, and it is often especially noticed that evening classes in physical education close down because of poor attendance. This is not very surprising. Very many young people are away from home for 12 hours out of every 24, and many, especially girls, have duties at home after the day's work is done. These facts, combined with inadequate nutrition, very easily account for the present state of things.

The raising of the school-leaving age to 15, and ultimately to 16, will serve to protect young people from the long hours of work and travelling at a period of great growth and development, and, with the provision of school meals and milk, will help to maintain adequate nutrition during adolescence. They will also remain under the care of the school medical service.

The Need for Leadership

Part-time attendance at a Young People's College will continue up to the age of eighteen for a minimum, to start with, of one day a week or its equivalent. In this connection physical education is regarded as a basic element in training. Skilled leadership will be needed for this work. The young people who attend will be drawn from different types of Secondary School, and the physical education they receive at College must take account of former training and progress from the point where this left off, even if an opportunity is taken to branch off in a new direction. The young people will be conscious of their status as wage earners, and they will attend for one day a week only. The plan and purpose of this single period of physical education will have to be thought out very carefully. Will it be counted a success unless young people are impelled to follow it up by engaging in some form of athletic pursuit (e.g. games, swimming, camping, hiking) during the rest of the week? Will hours of work, nutrition, the planning of cities, houses and transport make this a practicable possibility?

It is widely realised that the effectiveness of the proposed reforms in

education will depend upon the quality of the men and women who will staff the various schools and colleges and the training of teachers of physical education has come in for some discussion recently. Men and women have tended to follow divergent practices, and the gamut may range between the instructor with a brief and restricted training to the specialist with a lengthy one, for whom it is claimed that he is really capable of educating rather than merely instructing, but who is also subject to the usual accusations which are levelled against specialists. The special problems of physical education are inevitably bound up with general conditions in the teaching profession, and will therefore be affected by the suggestions made in this connection.

It is clear that physical education is not a matter which can be limited to the P.T. lesson. It is not, as so many still hold, simply "jerks," but is concerned with the whole man and his environment. As in the past, so in the future, progress in physical education will be woven into the texture of education, warped where it is warped and correspondingly liberal where it is rich.

BIOGRAPHICAL NOTES

GWENDOLEN E. CHESTERS, B.A. For five years Assistant Mistress in Public School for girls. Subsequently Educational Psychologist at East London Child Guidance Clinic and at the Tavistock Clinic; lecturer in Child Development at Gipsy Hill Training College. Contact with children in homes, and with educational work both with older children and with younger children in Nursery Schools. At present teaching members of Child Care Reserve employed in wartime Nurseries. Recent publication *Mothering of Young Children* (Faber and Faber).

ELSIE FOGERTY, C.B.E., L.R.A.M. Lecturer in English and Speech, Crystal Palace School. Lecturer to teachers under the L.C.C. Education Authority and at Bedford College. Founder of the Central School of Speech and Drama and the Association of Teachers of Speech. Lecturer under the L.C.C. Evening Classes on Speech Defects. Founder of the Speech Clinic, St. Thomas Hospital. Lecturer under the Diploma in Dramatic Art at the Central School of Speech and Drama. Author of *The Speaking of English Verse*, *Rhythm*, *Speech Craft*. Editor of *Standard Plays for Amateur Performance*, *Monologues for Recitation*, *First Notes on Speech Training*, *Stammering*, etc.

JOAN MCMICHAEL, M.B., Ch.B. (Mrs. Gabriel Carritt).—Graduated Edinburgh University 1929. First woman Clinical Assistant to Sir David Wilkie, Royal Infirmary. Experience in Emergency Blood Transfusion Service; recently Assistant M.O.H., Southall. At present full time Industrial Medical Officer at a large Arms Factory, and member of Welfare Advisory Panel, Ministry of Supply.

G. H. SYLVESTER, B.A.—Chief Education Officer, Bristol since 1942, and formerly Assistant Education Officer. Previous administrative service, Bradford and Wolverhampton.

SEX EDUCATION—A BRISTOL EXPERIMENT

By G. H. Sylvester, B.A.
Chief Education Officer, Bristol

In May, 1943, the Education Committee established a Health Advisory Committee with a dual function—(*a*) to draw up (as a short-term policy) a syllabus of instruction in matters relating to sex which could be given to school leavers, and (*b*) to prepare (as a long-term policy) a detailed syllabus of health education which could be implemented at every stage of the child's school career, and which would include instruction in sex matters at the appropriate stages.

The Committee consists of doctors, psychologists, inspectors, clergy and teachers; it has met at regular intervals since it was set up, and has already published its Short-Term Policy Report together with a bibliography for the use of teachers in the schools.

As part of the short-term policy, a vacation course for teachers has just been held in the City. The Health Advisory Committee assumed responsibility for the organisation of this course, and secured the co-operation of local doctors, teachers and clergy, and the aid of the lecturers of the Central Council for Health Education. The programme included an inaugural lecture by Professor B. A. Fletcher, M.A., Head of the Department of Education in the University of Bristol and Chairman of the Health Advisory Committee, and lectures on "The Physical Development of the Adolescent," "The Biology Syllabus of the Senior School in Practice," "The Emotional Development of the Adolescent," "The Intellectual Development of the Adolescent," "The Spiritual Approach to Health Education," "The Physiology of the Reproductive Process," "Health Education in the Schools," "The use of Visual Aids," "The School Curriculum," Tutorials and a display of films.

A special feature was made of the tutorials. The size of the tutorials was limited to a maximum of 16 students, and each was in charge of a man and woman drawn from different schools and, wherever possible, from different types of schools. Within the groups the teachers themselves came from senior, secondary, technical, junior and even infant schools, the great majority of them of course being senior school teachers. The tutors met before the tutorial meetings took place and planned the lines which the discussion might follow, but it was agreed that the arrangements should be as elastic as possible and that the previously chosen questions would only be introduced if discussion stopped short. In point of fact the discussions were full and spontaneous, and very little use was made of the questions which had previously been arranged.

Questions were worked out by the tutorial groups and forwarded to the lecturers, and every lecturer was present at the conclusion of the course in order to answer the questions which had been addressed to him or her by the tutorial groups.

The concluding session, therefore, took the form of a prepared "Brains Trust," at which each lecturer answered the questions addressed to him, and, where he found that he could do so with advantage, supplemented the answers given by his colleagues to questions addressed to them. This session was one of the most successful of the whole conference, and the quick interchange of question and answer added enormously to the interest.

The Education Committee has arranged for the lectures given at the course to be printed and published.

SUPPORT FROM SECONDARY TEACHERS

We are interested to note that the two Associations of Assistant Teachers in Secondary Schools passed at their January meetings resolutions bearing on the Council's work. The Assistant Mistresses' Resolution was as follows:

That this Association considers that full provision for adequate health education, including sex education, should be made in all schools and that full co-operation between parents and teachers is needed to effect this.

This resolution was passed almost unanimously (with the exception of two members).

The Association of Assistant Masters passed a similar resolution, namely:

That this Council welcomes the publication by the Board of Education of its pamphlet "Sex Education in Schools and Youth Organisations" and recommends members of the Association to give full co-operation in this work.

This resolution was passed unanimously.

BIOGRAPHICAL NOTES

William C. W. Nixon, M.D., F.R.C.S., F.R.C.O.G. (Born in the George Cross island of Malta). Before occupying the Chair of Obstetrics at Hong Kong University was a member of the consulting staffs of St. Mary's Hospital, London, and Queen Charlotte's Maternity Hospital. On return to this country was appointed Obstetric Consultant, London County Council, and Surgeon to The Soho Hospital for Women, London.

A. G. H. Smart, C.M.G., M.B.E., M.D., D.P.H. Medical Adviser to the Secretary of State for the Colonies. Late Colonial Medical Service. Author of various scientific papers.

FILM NOTES

PHYSICAL RECREATION FILMS

ALTHOUGH no physical recreation films have been made during the war, the following are amongst those listed in a pamphlet published by the Central Council of Physical Recreation entitled *Films about Movement and Health* (price 9d., post free from C.C.P.R., 58, Victoria Street, London, S.W.1.).

"FITNESS WINS."—A series of eight films obtainable from Gaumont-British Equipment, Ltd., Film House, Wardour Street, W.1, each film consisting of one reel (10 minutes), 16 or 35 mm., sound:—

Beginners Please—elementary recreative exercises for men; *Twenty Men and a Leader*—advanced recreative exercises for men; *Fitness Wins the Game*—men's games and athletics; *Four-and-Twenty Fit Girls*—women's keep-fit exercises; *Eighteen Girls and a Horse*—vaulting for girls and women; *Fresh Fields*—outdoor activities such as camping and walking; *Invitation to the Dance*—Modern Dance, i.e. Central European dancing.

GENERAL PHYSICAL EDUCATION.—Eight films made at the instigation of the Physical Education Committee of the British Film Institute are also obtainable from Gaumont-British Equipment, Ltd., in single reels (10–12 minutes), 16 and 35 mm., sound:—

Analysis of Agility Exercises—agility exercises for boys and girls; *Carriage*—good and bad, sitting, standing and walking; *Exercises Performed with a Rhythmical Swing*—rhythmical exercises for boys and girls; *Children aged 4–6*—organised physical exercises for very young children, useful for play centres; *Rural School*—activities for the 8–11 age-group in rural areas; *Progressive Training in Ball Handling*—how to catch, throw, hit and kick; *Boys' Winter Games*—playground and field games; *Boys' Summer Playing Field Activities*—outdoor games and exercises; *Girls' Winter and Summer Playing Field Games*—outdoor games and exercises for girls.

GAMES AND SPORTS.—A number of governing bodies have been responsible for the production of films depicting various games and sports. To mention only a few:—

Association Football—a series of one-reel films (10 minutes), 16 and 35 mm., sound or silent, obtainable from Gaumont-British Equipment Ltd., are entitled: *Kicking; Ball Control; Goal-Keeping and Throwing-in; Defence; Attack; Tactics; Training and Practical Hints.*

Hockey—a 16 mm. silent film consisting of 3 reels (40 minutes) made by the All England Women's Hockey Association, is entitled *Hockey for Women and Girls.* Obtainable from Mrs. Jackling, "Focklesbrook," Chobham, Surrey.

Lawn Tennis—six films in the *How to Play It* series, include: *Service; Forehand Drive; Backhand; Volley and Smash; H. W. Austin* and *Dorothy Round.* The films, each of one reel, 16 or 35 mm., sound or mute, are obtainable from Gaumont-British Equipment, Ltd.

Swimming—eight films made by the Amateur Swimming Association, varying in length from 9–22 minutes, are obtainable in 16 or 35 mm. sound or silent, from Gaumont-British Equipment, Ltd. They are entitled: *Breast and Butterfly; Back Stroke; Crawl; Diving, I, II; Floating and Ornamental Swimming; Life Saving; Development of Speed;* and *Water Polo.*

REVIEWS

MENDEL AND PASTEUR REVIEW, A Journal of Modern Biology (Volume 1, No. 1. Autumn 1943. Pp. 73. Published Terminally. Annual subscription 7s. 6d. post free. Single copies 2s. 6d., post free 2s. 8d.)

The timely appearance of this review deserves an enthusiastic welcome. Published mainly for Catholics under the auspices of the Guild of Mendel and Pasteur, it supplies a real need among them and among "all others who have Christian principles at heart."

This, the first number, contains a brilliant paper "On some aspects of Social Biology," by Sir Walter Langdon-Brown, M.A., M.D., F.R.C.P. The reprint of the Editorial from "Nineteenth Century and After"—(March 1943) on "Julian Huxley and the Religion of Progress" is both trenchant and challenging. One could have wished that the article "Biology and the State" by Professor Sir John Graham Kerr, F.R.S., M.P. (Ludwig Mond Lecture, October 1935) had not been included, as although it contains many points of interest, others are pressed home without sufficient evidence. Besides an informal account of the British Social Hygiene Summer School at Eton in 1943, there are two practical articles, one on "Stamps, Education and Sociology" by Philatelist, and an excellent one on "Hygiene in the School," by Thomas Boyce, M.A., B.Sc., Director of Education, City of Bradford, the latter being a reprint from the HEALTH EDUCATION JOURNAL.

Perhaps one of this Journal's chief features will be the reviews which are given in great detail. It is to be no one-sided affair, as it expressly points out that it will not hesitate to recommend for critical reading books with whose contents the Journal may disagree fundamentally on general, educational, scientific or religious grounds.—I. P.H.

HUMAN PHYSIOLOGY, by Kenneth Walker, O.B.E., F.R.C.S. (Pelican Books. 1943. Figures 40, pp. 126. Price 9d.)

This résumé of physiology for the layman follows the familiar lines of the standard text books on the subject for medical students. It is indeed a well-selected précis of such a work, and is up to date, accurate and illustrated by clear line drawings and two full-page X-ray photographs. Within this framework, it is undoubtedly an excellent introduction to one of the most fascinating branches of medical knowledge. We must admit, however, to being disappointed with it, perhaps because it is more an epitome for the student than what would have been expected to appeal to the non-scientific reader. The style is astringent and heavily biased in favour of the Latin side of English rather than the Anglo-Saxon and the presentation fails to interest one in physiology from the point of view of one's own life.—W. P. K.

SIMPLE EXPERIMENTS IN BIOLOGY, by Cyril Bibby. (Heinemann. 1943. Pp. 164. Price 7s. 6d.)

All teachers of biology, whether in the School or Training College, will welcome this compact collection of simple biological experiments, ranging from those which the lower school pupil can undertake to those which an intermediate student will need. Although the book is compact and light to handle, the experiments run into some hundreds. The author describes the collection as a "biological brantub." Teachers will value the book for the orderly grouping and numbering of the experiments. For advanced work and in the Training Colleges it will economise time often spent in typing schedules. Likewise both students and laboratory assistants will be helped in assembling apparatus

and material. The advanced pupil will like the short theoretical synopsis which introduces each chapter.

All the experiments may be performed with simple apparatus and familiar material, though some involve the use of the more expensive chemical reagents.

From biophysical and biochemical experiments, the chapters proceed in a logical way through experiments on soil, micro-organisms, germination, carbon assimilation, enzymes, circulation in animals, conduction in plants, respiration, excretion and voiding, growth, sensitivity, nervous system, reproduction, variation and heredity. There is a useful concluding chapter on technique, bibliography and sources of material.

The large numbers of teachers that will have to be recruited shortly with possibly scamped training in factual knowledge will need more and more this type of book, which should lessen the practical handicap with which they will inevitably start.

One wishes such an enterprising book the success it deserves and hopes that when war-time considerations of paper and expense have no longer to be considered, a second volume with illustrations will follow the first. —P. M. T.

How to Raise a Healthy Baby, by L. J. Halpern, B.S., M.D., F.A.A.P. (Hutchinson's Scientific and Technical Publications, London, 1943. Pp. 192, 23 illustrations. Price 8s. 6d.)

This useful book, by an American paediatrician, is written in the form of "questions and answers relating to the care, training, diet, growth, and development of infants and young children."

Each part consists of "general considerations," "diet," and "growth and development." The fifth part is devoted to the common infectious diseases. The general impression conveyed is that the baby to be raised belongs more to a hospital than a home. This needs must be, if the opening sentence of the introduction be true. "The birth of a baby usually brings to most parents a sense of bewilderment as to what they should know regarding an infant's needs, care, and general growth and development." Such parents will be grateful to this book for answering questions, many of which would be unnecessary had they prepared themselves to care for the baby before it arrived. Having neglected this evident duty they could not do better than leave their baby in the hands of the hospital nurse, who appears in thirteen of the twenty-two excellent photographs, the mother only appearing in two.

The medical tone of the book, with the nurse giving the newborn baby an enema in figure four and a bottle in figure five, makes the title somewhat misleading. Despite the author's statement that his information is "scientifically correct, authentic, and modern," some of it seems to anticipate the raising of an unhealthy baby.

"Considered in its entirety," says the author, "*How to Raise a Healthy Baby* serves to clear up for parents many common problems which arise during infancy and early childhood." In this lies its undoubted use.—L. G. H.

So You're Expecting a Baby, by Arthur Gee, M.R.C.S., L.R.C.P., D.P.H. (John Wright & Sons, Bristol, Simpkin Marshall, London. 1943. Pp. 36. Price 9d. Postage 1d.)

This is the second little booklet by Dr. Gee, his first being *So You've Got a Baby*. It contains chapters on the development and birth of baby, the date of its arrival, ante-natal supervision and much other most valuable material.

The reviewer feels that a mother reading this booklet would find it hard not to believe that pregnancy is as near

an illness as does not matter, while there is quite a lot about the preparation of the breasts upon which modern opinion is hardly in agreement. Mothers are quite definitely advised to have their confinements in hospital if they can. This may be good advice from the mother's point of view, but if consideration is to be given to the baby there are many who feel that babies do best if born at home.

The style is modern and on the whole very readable, but there is a tendency for the language to be familiar in parts, yet somewhat medical in others. We find advice to mothers who get into "flaps" mixed with words like foetus, umbilical cord, placenta, and os.

The first words in the booklet are "So you've decided to have a baby," and the book tends to assume that no woman has a baby unless she decides to do so. Have we got so far as this?

The little booklet will help many a mother with an enquiring mind.—D. H. G.

DOES SEX MORALITY MATTER? by David Mace, M.A., B.Sc., Ph.D. (Rich & Cowan. 1943. Pp. 154, Price 5s.)

Dr. Mace has marshalled the evidence, both sociological and psychological, against a sub-Christian standard of sex morality and makes a strong case for the maintenance of the Christian standard as the ideal at which to aim.

While he recognises that it may not be possible for every member of the community to reach this standard, yet he makes it clear that any serious departure from it on the part of the community as a whole would be disastrous both for individuals and for society.

He takes a broad-minded view of certain controversial aspects of the subject, e.g. divorce and birth control, and shows that the realisation of the ideal involves an acceptance of the Christian faith, the essence of which is that man owes his first allegiance to God, and that all human relationships, including that of marriage, are perfected in so far as he remains true to that allegiance.

All those who believe in the value of the Christian ethic for mankind as a whole should read this book.—V. D. S.

Q CAMP. Edited by Marjorie E. Franklin. (Published by the Howard League and by Mrs. Wood, Cherry Pie, Watlington, Oxon, 1943. Pp. 56. Price 1s. 6d.)

Although Q Camp, opened in 1936 at Hawkspur Green, Great Bardfield, confessedly refused to deal with those anti-social young men (or women) whose "proclivities would raise special difficulties of supervision," nevertheless the experience recorded in this jointly written pamphlet of the running of a pioneer camp for delinquents or near-delinquents, on Homer Lane principles, was of quite peculiar value.

The Camp, under its Chief, Mr. David Wills, set out to re-educate the maladjusted by placing them in a democratic environment with, rather than under, a staff who made use of psychological methods, advice and criticism, and whose main aim was to supply that security which the member lacked, through the medium of affection. Readers of *Q Camp* may with profit turn to Mr. Wills's own book, *The Hawkspur Experiment*.

Hardship, the necessary logic of experience, affection, natural as against imposed discipline, all played their part, with what success may be gathered from the interesting section in which 56 cases are described.

Dr. H. Mannheim suggests in a concluding section, that if the Criminal Justice Bill should ever become law, the experiment of Q Camp should be most relevant for Howard Houses and other new ways of dealing with delinquents.—R. D. F.